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THE
CINCINNATI
MEDICAL NEWS.

EDITED BY

J. A. THACKER, M. A., M. D.

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Therapeutical Effect.—The gelatine having been dissolved, the remedy is brought into contact with the surface of the stomach *under the most favorable circumstances*, and, if the case will permit, will soon be assimilated, and the desired results achieved.

Emetics are exhibited in capsules to great advantage, and quick returns may be confidently expected. In this respect capsules are in contrast to pills, which, from their form and constituents gradually dissolve in the stomach, producing the effects desired from narcotics, tonics, etc., while they are not dissolved rapidly enough for the use to which powerful emetics are devoted.

Administration.—Capsules, can, of course, be applied to the administration of any class of medicines, either simple or in combination; yet they are especially designed for facilitating the act of swallowing such articles as *powdered roots and gums* (which, from their insoluble or glutinous nature, are liable to linger in the mouth too long), or for disguising the taste of *quinine, morphine, capsicum, oils, fluids and solid extracts, etc.*

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Dose, two to four drachms, three times a day, which may be administered undiluted, or
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Many preparations of malt have been placed before the medical profession as representing the properties of this agent; few, however, seem to have fulfilled what was expected from the glowing representations accompanying them. The trouble seems to lie in the method of preparation, wherein, by careless handling and undue use of heat, the preparation becomes burnt (as shown in appearance and taste), and practically useless. We have devoted considerable attention and experiment to our extract of malt, and have, we believe, developed a really valuable article, which we offer wholly on *its own merits*. Great care is exercised in the selection of the malt, and in the careful use of heat in its preparation.

The properties of this remedy are due principally to the principle diastase (which has the power of changing the insoluble starch to the soluble maltose) as well as the nutritive elements. Its use is indicated in certain forms of dyspepsia (amylaceous), phthisis, bronchitis, asthma, loss of appetite, chronic diarrhoea, debility of females and the aged, and in convalescence from exhausting diseases, etc.

CAUTION.

The black scorched preparations, offered at low prices in the market, should be avoided, as giving physical evidence of undue use of heat in process of manufacture. Concerning the manufacture of malt extract, the German Pharmacopoeia directs: "Digest for an hour, at a temperature not exceeding 65° C. (about 150° F.); then heat the mass to the boiling point, and strain immediately by expression. Evaporate the clear liquid as rapidly as possible, stirring constantly, to the consistency of a thick extract. Extract of malt is *yellowish brown, having an agreeable sweet taste*. It should be preserved in a cool place."

Hence physicians should examine the preparations of malt, dispensed on prescriptions, as to appearance, odor and taste, for evidence as to the medicinal and nourishing value of the article.

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Extract Malt with Protochloride Iron.

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Extract Malt with Pepsine.

Extract Malt with Pepsine and Bismuth.

Extract Malt with Pepsine and Strychnia.

The combinations of malt extract with pepsine, bismuth and strychnia are useful in the different phases of dyspepsia, chronic diarrhoea, debility, nervousness, etc., as indicated.

Extract Malt Ferrated.

Extract Malt Ferrated with Quinine.

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We have for many years been supplying this element to the profession in the form of pills, which seem to obviate the objections to the other forms of administration now in use. They are absolutely protected from change by the sugar-coating, itself a powerful deoxidizing agent. They are easy and pleasant to administer, prompt in their action, and probably introduce the element in the best form for speedy absorption.

While pills of phosphorus, properly prepared, are a safe and efficient method of administering this remedy, physicians will do well to avoid all brands which are not *known* to be worthy of confidence. To properly prepare these pills requires expensive and complicated apparatus, and the highest skill that can be procured. We ask only a careful comparison of our products with those of other manufacturers, believing that such a test is the best advertisement we can desire.

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Phosphorus and Iron.

Phosphorus and Nux Vomica.

Phosphorus, Nux Vomica and
Damiana.

Phosphorus, Iron and Nux Vomica.

Phosphorus, Iron and Quinine.

Phosphorus, Iron, Quinine and Nux
Vomica.

Phosphorus and Quinine.

Phosphorus and Quinine Comp.

Phosphorus, Quinine and Nux
Vomica.

Phosphorus, Quinine and Digitalis
Comp.

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Phosphorus, Zinc and Strychnia.

Phosphorus, Opium and Digitalis.

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THE CINCINNATI MEDICAL NEWS.

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VOL. VIII. No. 6.
New Series.

ORIGINAL CONTRIBUTIONS.

Lecture on Typhoid Fever.

Arranged for the MEDICAL NEWS.

TYPHOID FEVER, which has as synonyms Enteric Fever, Ileo-Typhus, Abdominal Typhus, Typhus Mitior, Dothinitis, Common Continued Fever, etc., is a zymotic affection, and is classed among the essential or idiopathic fevers, produced by some morbid agent, generated without the body, poisoning the blood. Besides existing sporadically, it prevails endemically and epidemically, and is communicable. Its greatest ravages, as stated by Drs. Jenner and Trousseau,* are among young people. Children between the ages of five and eleven years are quite obnoxious to it. After twenty-five years of age there is the greatest immunity from it. But persons over sixty years old are known to contract it. It seldom attacks infants under two years of age.

The leading symptoms presented may be briefly stated as follows: There is continued fever. The accession of the fever, however, is very gradual in *all* cases, occupying three or four days in reaching its height; an increase of temperature in the evening and remission in the morning following one another, "the temperature every morning and every evening being about 2.2° Fahr. higher than on the preceding morning and evening, while the morning temperature is generally about 1.1° lower than that of the previous evening; or according to the following formula: "*First day*, morning, 98.5°; evening, 100.5: *second day*, morning, 99.5°; evening, 101.5°: *third day*, morning,

*Trous. Clin. Med.—Amer. Edition. Vol. I. P. 235.

100.5°; evening, 102.5: *fourth day*, morning, 101.5; evening, 104°" (*Aitken*.) If a person who was well yesterday, or ailing but little, has to-day a temperature of 103° or over, whatever may be the disease, typhoid fever may be certainly excluded. Languor and debility are felt from the beginning. Frontal headache and pains in the abdomen, usually exist with vague pains in the lower limbs, buzzing in the ears, and flashes before the eyes: dizziness is considerable when the patient rises up suddenly and attempts to walk. Insomnia is often present, and when the patient does sleep, the sleep is restless and disturbed by dreams. During the first week, the disease having begun, although the patient is quite conscious, yet he usually takes but little interest in things around him, and replies to questions seemingly reluctantly. Diarrhea sets in early in the disease, and, as it advances, it increases. The discharges are liquid, usually of a bright, yellow color, sometimes containing altered blood, and are alkaline in their reaction. Some describes them as being "like that of pea-soup." Between the seventh and fifteenth days of the disease, rose-colored spots make their appearance upon the surface. The most usual time, probably, is between the seventh and eighth days—sometimes between the third and fifth days; but they may be delayed considerably. In some cases they are absent altogether. At first they are few in number, and appear only on the trunk, but soon they are observed on the neck and extremities, and finally are seen on the whole surface, except on the face. They are slightly elevated, but the elevation frequently is only observed by passing the finger gently over them. They are circular, and are of a bright, rose color, "the color fading insensibly into the natural hue of the skin around." They disappear on pressure, but reappear when the pressure is removed. They vary in size, varying from one to one and a half lines in diameter. The number rarely exceed from twelve to twenty or thirty, and sometimes there are but two or three. After the first appearance of the eruption, fresh ones make their appearance every day or two, each papule lasting about two days, for fourteen or fifteen days. The urine is of a febrile character, urea and uric acid being in large quantities, indicating the waste that is going on, and consequently of a high specific gravity. Gurgling on firm pressure in the iliac fossæ is quite common and may be

regarded as a peculiar symptom. Pressure over the abdomen is attended with tenderness, and, at the same time, there is fullness from tympanitis and resonance on percussion. The mesenteric glands, and glands of Peyer, and minute solitary glands, present *specific lesions*, which we will hereafter describe, but which do not constitute the disease, and are not the source of the symptoms, but are always present to a greater or less extent, and, without them, the disease can not be said to exist.

Typhoid fever is usually ushered in with rigors, chilliness, or diarrhea. Now and then it may be ushered in somewhat suddenly, but generally it comes on insidiously, so much so sometimes that the patient has difficulty in stating just on what day his illness began. In numbers of cases there will be felt, for some days, only a feeling of malaise, attended with a feeling of weariness in the limbs, and a disposition to be on the feet as little as possible. The appetite is poor or fails altogether. In other cases the patient suffers from irregular chills and flushes of heat. The pulse is increased in frequency, the limbs ache, there is headache, redness or coating of the tongue. During the day there will be, perhaps, a tendency to drowsiness, and at night to wakefulness, restlessness, and dreaming. With the other symptoms there are usually associated, or very soon follow, and generally form the most striking phenomena of the early symptoms, vomiting and diarrhea, with abdominal pain and tenderness in the umbilical region. Now and then they are not present.

As has been intimated, feebleness is usually marked from the beginning of the disease, and not unfrequently the patient is not able to leave the bed during the first week, but in other cases, while the symptoms gradually increase in severity, he may be able to be up more or less, and even walk around dressed. If it happen that the bowels were any ways constipated at first, their condition will usually be changed before the end of the week. They will be found at this time very sensitive to anything tending to irritate them. If an emetic be given, it will sometimes produce severe diarrhea. So that care must be employed as to the character of the medicines administered—it being far more easy to set up a profuse diarrhea than it is to check it after it has been started.

It is not unusual for more or less epistaxis to take place

during the first week. This has a tendency sometimes to relieve the head symptoms. As stated by Niemeyer, in most, but not in all cases, cough and mucous expectoration indicate bronchial catarrh, which may also be discovered by physical examination. But beyond this bronchial catarrh, which may extend to the smaller bronchi, as may be observed by the extensive whistling sound, the lung affection does not extend further, unless there is set up the condition known as typhoid-pneumonia. The pulse increases in frequency, and rises to ninety or a hundred, or more, and so also are the respirations increased; but the normal ratio between the pulse beats and the respirations are not preserved, nor does the frequency of the pulse always correspond with the increased rise of temperature. The pulse is very easily disturbed, as the act of sitting up will sometimes raise it twenty or thirty pulsations a minute. "Other things being equal, rapidity of pulse implies severity of attack." Curiously it has occurred that during marked fever the pulse has fallen below fifty or sixty. Dr. Murchison has observed it to fall to thirty-seven. In this case, however, I do not recollect whether it is mentioned that the pulsations of the heart were the same. In some instances the feebleness of the muscles of the heart may be so great that every wave of blood following upon the systole of the heart may not reach the radial artery. During the early period of the disease, the pulse is generally full, but quite soft. In the latter stages, when the debility is great, along with greatly increased frequency, it is very small, and may assume a thready feel, and become so compressible that care must be employed in examining, or it will be obliterated by the fingers. In some cases the tongue may be but little altered in appearance. But generally it is covered at first with a moist, whitish brown fur, not thick. Afterward it becomes red, fissured, and dry, or incrustated with a brown or black coating, while dark sordes collect upon the teeth, gums, and lips. Especially if the diarrhea has been severe, there will be noticed the gurgling sound--the ileo-cecal gurgling--before alluded to on pressure in the right iliac region. The abdomen will be found more or less tympanitic, with tenderness upon pressure. "Toward the end of the first week," says Niemeyer, "the enlargement of the spleen is ordinarily marked. The enlarged organ has usually a horizontal

position; it rarely projects beyond the ribs, and is pressed upward and backward against the spinal column by the distended intestines." Hence, it is difficult to reach it by palpation. We may, however succeed to some extent in defining the increased space occupied by it, by placing the patient on his right side and percussing the lower ribs of the left side. "But a greatly enlarged spleen may induce but little dullness when it is pressed into the hollow of the diaphragm by the distended intestines, and only a small part of it lies in contact with the thoracic wall."

In the *second* week of the disease, especially after the middle (in the severer cases), the patient complains less of pain in the head and limbs. In fact, he may cease to complain altogether. This is not in consequence of the morbid conditions producing the pains becoming less, but is the result of the general blunting of the sensibilities by the action of the blood-poison upon the nerve centers. Deafness also sets in, which Niemeyer states is produced by the propagation of the typhous oral and pharyngeal catarrh to the eustachian tube and cavity of the tympanum. But it is no doubt due to no inconsiderable extent to the paralyzed condition of the nerve functions. The expression becomes stupid, and it requires considerable effort to attract the attention of the patient. It is oftentimes difficult to get him to protrude his tongue. When shaken and spoken loudly to, in order to arouse him, he will manifest annoyances, and request to be let alone. In other cases there will be active delirium of a violent character, requiring two or three persons to hold the patient in bed. But, as the disease advances into a low form, the delirium is modified accordingly, and assumes a low, muttering character. A very common delusion, on the part of the patient, is, that he is among strangers far away from home, and he mutters a wish to be taken there. Toward the end of the week the evacuations are frequently involuntary—the patient being insensible to the distension of the bladder and rectum when full, or, in consequence of the mental torpidity, unable to bring sufficient will-power to bear to prevent. These grave symptoms, commencing at the latter part of the second week, in the severer cases, continue on into the third week, increasing in gravity and have added to them other profound ones. But in milder cases, "at the *beginning of the second week*,

or at least during its second half, severe and mild cases diverge so unmistakably," says Dr. Aitken, "that the course of that period is decisive as regard what the future progress will be. A favorable course during the second week permits us to anticipate a favorable termination of the disease. In mild cases, although the evening temperature may reach 103° , and even exceed 104° , considerable abatement (1° to 2°) takes place during the morning, which becomes more and more obvious towards the end of the second week." These mild cases progress favorably when we find a diminution of morning temperature over that of the evening steadily continuing, and especially when there is an undoubted decrease of the morning or evening from that of the previous morning or evening, even if it be not more than a half degree. It is said that a retardation of recovery, until at least the fourth week, is to be anticipated, when in the second week the morning temperature is above 103° , and the evening above 104.5° ; when the exacerbations occur early in the forenoon and remain after midnight; and lastly, when a fall of temperature about the middle of the week does not take place.

In the *third* week of typhoid fever, the symptoms just enumerated are increased in severity, and others added to them, providing the phenomena have not before this exhibited a lessening in severity, marked by a decrease of temperature. In this disease, probably more than in any other, is the temperature to be accurately observed and studied; for almost upon it alone is the prognosis based.

Hemorrhage from the nostrils is not unfrequent in typhoid fever in its early stages as we have before stated, but at that time usually it is very moderate and not important, but, when occurring in the latter stages, the third or fourth week, it is more abundant, and may demand the interference of remedies. But *hemorrhage from the bowels*, which is not an uncommon phenomena in the advanced stages, is much more important. It produces exhaustion, and is of bad omen. Sometimes the blood is red, at other times it is black and disintegrated. Bleeding takes place from other mucous surfaces, and, as Dr. Wood states, the petechiæ, which occur in the low form, are nothing more than examples of an interstitial hemorrhage. In the third and fourth weeks the patient becomes very weak, and if

the bed be any way inclined, or the pillows somewhat high, he has a tendency to slide down to the foot of it. Somnolence and stupor become great—the delirium, which before was more or less of a noisy character, and the restlessness ceasing. *Subsultus tendinum* occurs—the contraction of a single fasciculus of a muscle—and also *floccitatio*, or picking at the bed-clothes, and at imaginary objects floating in the air, termed *muscæ volitantes*, the result of minute extravasations in the retinae, which the patient fancies he sees. The coating upon the tongue increases, becomes dark or black; sordes collect upon the teeth and gums. The diarrhea is usually profuse, and meteorism often happens, which Dr. Aitken says takes place to a greater or less degree in half the cases, and if severe, a fatal result generally follows. The rose-colored spots fade, but there occur petechiæ and sudamina. The heat of the body is acrid, and the odor exhaled has been likened to that emanating from mice. Bed-sores, attended with sloughing, are common on those parts of the body which have been exposed to pressure, as over the sacrum, heels, scapulæ, trochanters. Gangrene, too, may attack blistered surfaces, leech-bites, etc. When the disease assumes a low form, parts of the body pressed upon in lying should be frequently examined, as extensive inflammation, with sloughing, may occur without the patient making any complaint. I have known nearly the whole sacrum to be exposed to view without the patient showing any signs of suffering. At the commencement of the third week, there being a tendency to a fatal termination, the temperature increases in height and the pulse in frequency. The morning remissions become indistinct, and the temperature may rise higher than on the previous evening. Fatal termination is most common in the third week. If not induced by some peculiar accident, Niemeyer says that death results from edema of the lungs, after the prostration weakness, temperature, and pulse have reached the highest grade. The more the respiration is affected, the sooner and more readily paralysis of the heart occurs. But if the case terminates favorably, the symptoms exhibit an improvement about the middle of the third week. The sort of comatose state in which the patient has been lying is lessened, and he is more easily aroused. He soon begins to give some attention to things around him,

and when he sleeps he sleeps more naturally, and seems to be refreshed. His sensibilities, too, are increased, and he complains of the pain of his bed-sores. The stools are diminished in frequency and are more consistent. "The blue, sodden appearance of the patient disappears, the face becomes paler; the tongue grows moist at the tip and edges, its coating is gradually thrown off; speech becomes more intelligible . . . With the abatement of the other symptoms, the difference between the morning and evening temperature becomes remarkable; while the thermometer in the axilla still rises to 104° or 106° in the evening, in the morning it is only 101° to 103° , or even less. These lower degrees are not observed in the evening for some time yet." As the temperature lessens, the pulse falls, although the relation between the two is not maintained.

In some cases that recover, having proceeded into the third or fourth week before any decided abatement of the symptoms has begun to manifest itself, the nervous centres having been greatly implicated, a condition of idiocy or insanity remains behind for some time after the physical system has been restored to comparative health; and in pretty nearly all cases in which there has been great cerebral depression, there seems to be some diminution of mental power for some time after convalescence. Dr. Jenner relates that many cases have come under his observation in which childishness of mind continued for more than a month after apparent restoration to health. Typhoid fever, in mild cases, continues at its height a week or two weeks, or from eleven to eighteen days in its whole duration. Now and then cases are so exceedingly mild that the patient is confined to his bed but a few days; and, sometimes, in such cases, it might be doubted that he had the disease, if there were not other substantial evidence, besides a want of severity in the symptoms, of blood poisoning by a marked poison. From the subsidence of the disease or exhaustion of the poison, convalescence occupies from ten to fourteen days. In severe cases writers differ very much as to the duration of the disease and the length of time occupied by convalescence. Dr. Aitken states that the whole disease extends from four and a half to ten weeks, or even longer; Dr. Roberts says that it rarely continues beyond the thirtieth day—the usual range being from three to four

weeks. Murchison mentions an instance in which fresh spots appeared up to the sixtieth day. Other writers give twenty, twenty-two, twenty-four, twenty-eight days as the mean duration.

There is scarcely any disease so reliable to *relapses*, after convalescence has seemingly fairly set in, as this disease. It is said that they are more apt to occur about ten days or a fortnight after convalescence from the first attack, and are marked by a return of all the former symptoms, even the rose-colored spots reappearing. No person having had typhoid fever, although so far convalescent as to be able to be up and able to attend to business, is to be regarded as free from danger so long as the thermometer records in the evening a higher temperature than normal, although it may not be more than a degree or even less. Danger is not to be considered as passed until the temperature, having reached the normal standard, is found to *continue* there. A great danger to be apprehended during convalescence is perforation of the bowels. This accident may also occur during the first weeks of the disease "from the formation of a slough, not only in the mucous coat covering the patches, but also in the muscular and serous coats at the affected parts." (*Niemeyer*.) But an ulcer, which may not have penetrated through the intestinal parietes, while the disease is at its height, may continue its erosive action after other morbid processes have abated and make its way through the walls after convalescence has begun. When this has occurred, all the symptoms of an intense peritonitis are usually at once set up—severe pain in the abdomen, which becomes extreme from the slightest pressure—followed by collapse. Niemeyer says that the most certain points in the diagnosis of perforation is the escape of air into the peritoneal cavity, which is shown by the liver being pressed away from the abdominal wall and a consequence disappearance of the liver-dullness. If this symptom be absent, he says, there is at least a possibility that the peritonitis is not due to perforation of the intestine. Perforation occurs in about one of five fatal cases. The point generally at which it happens is in the ileum near the valve.

The causes of death in typhoid fever, according to Dr. Murchison and others, are as follows: 1st. By direct action of the poisoning. Sometimes the poison is of so intense

a character that it destroys life during the first days of the disease. In some cases the nervous centres seem to be overwhelmed by its malignancy, or the blood to become decomposed. Gas has been detected in the veins at the root of the neck for some minutes before death. 2d. By implication of the kidneys, as shown by hemorrhage from them, and by bloody urine. 3d. By congestion of the lungs or brain. 4th. By hemorrhage from the bowels. 5th. By exhaustion of diarrhea. 6th. By peritonitis with or without perforation of the bowels.

The average mortality, as stated by some writers, is one in five and a half to one in six. But, in this country, I do not think it is so great, unless it be in some more than usually malignant epidemics.

We have mentioned that there are certain lesions accompanying typhoid fever, which, although they do not constitute the disease, are not the cause of the symptoms, yet are necessary manifestations, so that unless they are present, the disease can not be regarded as one of typhoid fever. An eruption upon the skin is a necessary manifestation in small-pox, although the primary fever and other phenomena are not dependent upon it, but upon a *specific* poison, poisoning the blood. So in typhoid there is a *specific* poison acting upon the blood and nervous centres, accompanied by certain specific lesions and other characteristic phenomena. These lesions consist of affections of the intestinal glands, those of Peyer and Bruner, and the solitary mesenteric glands. Messrs. Jones and Sieveking, following the description of Rokitansky in describing the changes that takes place in these glands, give the following account: "Hyperemia, to a greater or less extent, is set up around the solitary follicles, and in and around Peyer's patches. Enlargement and extension of these glandular structures proceed nearly *pari passu* with the hyperemic congestion. After a certain time, the length of which varies in different cases, the contents of the glandular masses soften, break down, and are discharged. The cavity, which remains on the mucous surface, constitutes the typhous ulcer, the size of it varies from that of a hemp seed to that of a half-crown. Its form is elliptical, round, or irregular, and sinuous, according to the shape of the part which has been affected. The base of the ulcer is formed by a delicate layer of submucous tissues which covers the muscular

coat. While the small intestine—the lower third being the most obnoxious—is the usual seat of the ulcerative process. Rokitansky has seen the mucous membrane of the large intestine, down to the rectum, riddled with ulcers.” There is usually not always thickening and induration in the side of the ulcer. When there is not, it indicates an absence of reparative action. The agminate and solitary glands become tumefied from a kind of albuminous exudation. Black granules and grains of pigmentary matter are often present in it, but they are not peculiar to the typhoid state. They give to the glands a black dotted appearance, as seen by the naked eye. The mesenteric glands become invariably enlarged. Their enlargement seems simply to be the result of inflammation. There is found nothing in their substance besides the normal nuclei but granular and amorphous matter, and some celloid cells. The vessels of their capsule and of their interior are usually much congested. Dr. Watson states that the cicatrization of the ulcers is not unfrequent: “The ulcerated surface seems to clothe itself afresh, by degrees, with a new mucous membrane, which is thin, however, and adherent to the subjacent tissues, and does not slide over them when pressed with the finger and thumb, as the healthy portions of the coats of the bowels will do upon each other. And in place of the cicatrix there is usually to be seen a manifest puckering, and a number of little wrinkles or lines, radiating from a common center.”

As to the CAUSES of typhoid fever, there has been a great deal of discussion; and while it is true that we now possess more extensive and accurate information on the subject than formerly, yet it must be confessed that there is still a good deal to be learned.

There is no doubt, as pointed out by Niemeyer, that it not unfrequently has its origin in *miasm*; for it is known to occur in localities far removed from travel, which have had no communication with other places, and in which there has been no case for years. But while it often has its origin in *miasm*, there is very positive evidence that it is propagated by contagion—the virus having its nidus in the dejections of the patient, and finding a lodgment in others, in whom it springs into activity through the water drunk by them. It is generally agreed

that it can not be transmitted by means of the exhalations of the lungs or skin.

But there is reason to believe that not only the dejections of typhoid patients may contain the poison of the disease, but feculent matter generally may generate it through decomposition. Says Dr. Roberts: "It is in the feces that the poison is chiefly contained, and by their agency the disease is propagated." "*Water*," however, he continues to say, "is the great channel by which the poison is conveyed, and numerous epidemics and endemics as well as sporadic cases of typhoid fever have been traced to some special water-supply." In this assertion, Dr. Roberts not merely expresses his own opinion, but that of many eminent physicians, among them a number of Germans. Niemeyer, however, states that the absorption of the *contagium* is chiefly through the lungs, but recognizes the fact that persons have contracted the disease by drinking water from a well that communicated with a privy. Dr. Bristowe, in speaking of the poison having its origin in the feces, says: "It has been proved beyond all cavil, that enteric fever is *par excellence* the fever of fecal decomposition. . . . It has been observed, however, over and over again, that the feces, which are probably at first wholly ineffective, become, in the course of putrefaction, virulent in a high degree, and impart their infectious properties largely to the contents of cess-pools and sewers, and thence to well and other waters, with which the former happen to communicate. In many cases, indeed, the source of an enteric fever outbreak has been distinctly traced to the water of a well, into which there has been percolation from a neighboring cess-pool recently contaminated with the evacuations of a patient suffering from that fever." Almost every one has heard of instances of the sudden appearance and spread of typhoid among the numerous residents of a hotel, seminary, tenement-house, or other large building, on the accidental opening of an old privy vault, which was supposed to have been filled up, and then covered over and floored over. The morbid germs which seemed to be contained in the putrefied feculent matter, spreading over the house, have struck down with disease every one about. But, in such instances, have not these germs found their entrance into the system through the lungs?

The TREATMENT of typhoid fever in the last twenty-five years or less time has undergone almost a complete revolution. Experience has demonstrated that in this disease the strength of the patient from the beginning must be husbanded. Even at the onset there should be no *spoliation* of the vital resources, of the patient; for, during the course of the disease it often seems to be a contest of strength between it and the patient, as to which one is able to hold out the longer before becoming exhausted. It not unfrequently happens that all our hopes of recovery of the patient are based upon his strength to hold out for a given time, feeling sure that if endurance continues unabated to that period he will recover, if not, he will die.

There is no *specific* remedy in the treatment of this disease. It must be treated "*on general principles*;" viz: such medicines are to be administered from day to day as *are indicated*, and only such. The disease is a self-limited one. It is a disease which, when it has become established, has a definite course to run, and it can not be cut short—we can only hope to conduct it to a safe issue by carefully watching for complications and combating them, if any make their appearance. The physician is not to entertain the expectation of curing it, for no self-limited disease can be cured.

A typhoid fever patient should be placed under the most favorable hygienic conditions possible. The room should be kept at a temperature of about 65 or 70 degrees. A thermometer should always be kept hung up in the room, and the nurse instructed to carefully notice that it never registers less than 65 degrees or more than 70 degrees. Besides maintaining the room at an even temperature, great care should be taken that it be properly ventilated without exposing the patient to draught, and endangering him to "take cold." In ventilating, doors should not be kept open, nor windows pushed up from the bottom. The best mode is to have one or more of the windows, most distant from the patient, let down at a proper degree from the top. The evacuations of the patient should be disinfected before being emptied into the water-closet; and after being emptied out, the vessel which held them should be thoroughly rinsed, and, if possible, rinsed with a disinfecting solution. All water-closets, drains, and sewers should be assiduously kept

clean and frequently disinfected. An excellent disinfectant to be thrown into a vault is a solution of commercial sulphate of iron (copperas). The solution may be made by dissolving a pound of the iron salt in about a bucketful, or three gallons, of water. A cheap disinfectant, also, is commercial carbolic acid, dissolved in water. Other disinfectants are bromine, Condry's fluid, chloride of lime, chloride of soda, chlorine gas, etc., one or the other of which may be employed according as it may be appropriate for the purpose required. It should be kept in mind, however, that chlorine gas should not be inhaled. The Health Officer of Cincinnati, in cases of infectious disease, directs shallow vessels, containing bromine, to be placed about in different parts of the room.

As has been mentioned, in typhoid, there is either diarrhea from the commencement or a tendency to it. In cases of the former, which is most generally the condition, remedies should be employed to hold it in check. Some very eminent physicians direct that the discharges, if possible, should be stopped at once, and the bowels kept locked up. Others urge that the diarrhea should not be entirely checked, but only kept in moderate bounds—that it is largely through the intestinal excretion that the morbid poison of the affection is eliminated—and that if this excretion is prevented the elimination is hindered. In some cases, probably, it would be better not at once to stop the diarrhea, but to permit it to continue moderately, but my experience enables me to be quite sure that in very many cases it is best, while the bowels are not made costive, to check all appearance of diarrhea—to limit the stools to one a day. The poison that originated the disease, in my opinion, is neutralized or exhausted in the system, and it does not require to be eliminated, in order for its action to be destroyed. If, on the contrary, there be constipation at first, and not diarrhea, mild laxatives should be exhibited occasionally, but the greatest care should be observed that diarrhea is not set up by them. The best purgatives are castor oil, seidlitz powder, and small doses of rhubarb; but much the safest mode of acting upon the bowels are by enemata of pure water, or starch water, or water with a small amount of common salt dissolved in it or castile soap. For checking diarrhea, opium, Dover's powder, or small doses of morphine combined with nit. or carb. bismuth,

and with vegetable astringents, as kino, tannin, etc. During the first few days of the disease, but never after the first week, I administer a few quite small doses of calomel. A very common prescription with me in an adult case, when first called, and there is diarrhea, is the following:

R. Pulver. Opii gr. IV;
Hydrarg. Chlor. Mitis gr. III;
Bismuth Sub-Nit. gr. XV;
Sacchar Lactis ℥i.

M. Div. in Chrt. No. VI.

Sig. Give one every three or four hours.

A little calomel, during the first few days of the disease, acts beneficially in the way of correcting the secretions of the liver and other glandular organs. The greatest care should be observed that ptyalism is *never* produced. In fact, three or four grains of calomel, divided into half a dozen doses, is generally all that is needed of it.

Other indications that will be met with is to diminish the morbid heat and lessen the action of the heart. But whatever means accomplish one of these will tend to bring the other about. Digitalis not only lowers the heart-beats, but directly moderates the temperature. When, therefore, there is a high temperature and a rapid pulse, but not very small, it may very properly be prescribed; but its action should be carefully noticed on account of its well-known cumulative properties. Other medicines that lessen the pulsations of the heart are veratrum viride and aconite. The former is a very depressing agent when its specific effects are brought about; but if employed with any caution it will lessen the number of the pulse-beats without producing the slightest sickness of stomach or bringing about any unpleasant effects whatever. Four or five drops of the tincture may be given every four hours to an adult.

But the most direct means of acting upon the temperature, when it has become excessive, is to place the patient's whole body in a bath-tub conveniently placed. If any therapeutic agent will shorten the disease, after it has become established, it will. In private practice, however, it is often difficult, on account of scruples of friends, of carrying it into execution. At the beginning of the bath, the temperature of the water should be but

a few degrees lower than that of the body of the patient ; but afterward it should be lessened by pouring in cold water. Cases have been reported in which the temperature of the water has been reduced to 40 degrees and 50 degrees, with most favorable effects by putting ice into the bath. The patient should be kept in the water until there is a decided diminishing of his heat unless exhaustion of strength forbids it. When taken out, he should be rapidly wiped dry, and comfortably covered up in bed. Sometimes sponging the body with cold water while the patient lies in bed is beneficial—sponging a part of the body at a time, as a limb, and wiping dry before passing to another part. But the bath is by far the most efficient.

Hemorrhage from the nose generally needs no treatment, especially if it occurs in the first stage. Hemorrhage from the bowels during the course of the disease is a very dangerous symptom, and requires prompt action. For arresting it, full doses of tannic and gallic acids may be given, or acetate of lead with opium. Turpentine has been used with benefit. For tympanitis enemata of turpentine may be employed, or of assafetida. Also a liniment composed of equal parts of turpentine and sweet oil may be employed over the bowels. Passing a gum-elastic tube far up the rectum has sometimes *acted favorably in relieving* the bowels of their gas.

If perforation should take place or peritonitis set up, absolute rest must be enforced, and the patient kept under the influence of opium. Purgatives, under such circumstances, must not be used, even if there be considerable constipation. Abstinence from food, also, should as much as possible be enjoined. If administered at all it should be of a liquid form, easily absorbed.

The diet, in typhoid, from first to last, should be nutritious, but of a form that is easily digested. It should consist of what are termed "slops." Chicken soup will be found excellent. Physicians should be careful not to starve to death their patients by the so-called beef teas, under the impression that, in taking them, the patients are getting much nourishment. Beef tea has in it no nutritive properties whatever. By boiling beef in water, the salts, and may be a few other elements, are dissolved, but the albumen, the chief element of nutrition in beef, is left behind in the meat coagulated, not a particle being dissolved. The tea, therefore, is some stimulating but not

at all nutritious. A very nutritious preparation is made by grating the beef, after the boiling, into the tea. Liebig's and some other preparations of meat are said to be quite nutritious.

As the disease assumes a lower form, tonics and stimulants must be employed. Our most reliable tonic is sulph. quinine. It may be given in grain doses every three or four hours. I frequently use quinine, at the outset of the affection, as a sedative to the heart's action, and to diminish the body heat. For this purpose, I prescribe it in doses of 1 1-2 to 2 grains every three or four hours. The effects are often well marked. In low stages, alcoholic stimulants, as brandy and whisky, should be administered in as large quantities as the patient will bear without unpleasant effects. Some patients will bear well a pint of either. But alcoholic stimulants should never be forced upon a patient who does not tolerate them well. If they produce headache, increase the stupor, add to the frequency of the pulse and not to its volume, make the tongue dryer if possible, contract or dilate the pupil more, according to circumstances, they should be discarded altogether. Carbonate ammonia, given in a solution of gum-arabic, sometimes acts well, also the acromatic spirits of ammonia.

Careful attention should be given to any bed-sores that may arise. Portions of skin that have become inflamed may be covered by diacylon plaster. Sloughing parts should be poulticed and protected from pressure. Previous to applying a poultice a weak solution of iodine should be applied to stimulate granulating. But circumstances and conditions of the patient and the sores must govern us in our treatment of these complications.

It should be kept in mind that perforation sometimes happens after convalescence has set in. So long as there is an increase of temperature in the evening, as shown by the thermometer, the patient is not out of danger of perforation. In fact, if this increase is persistent after convalescence, even if it be but slight, it is a cause of alarm. The patient should, therefore, be carefully watched during the whole time of convalescence—attention being given to his diet, amount of exercise, regular habits

Yangono Naviti, or Piper Methysticum in Gonorrhea, Etc.

BY HENRY M. MARSHALL, M. D., GUNDAGAI, NEW SOUTH WALES.

SOME years ago, whilst traveling through and residing for a time among the islands of the South Pacific, more especially the Vitian or Fijian group, before the cession of those charming and fertile islands to the British Crown, I obtained a very good knowledge of the "vosa viti," Fijian language, which is the dialect spoken throughout the whole of the Vitian or Fijian Archipelago, numbering some 250 islands.

Making myself at home and friendly to the islanders, rendering them many valuable medical services, I gained their fullest confidence, and became quite a celebrity among them as a "mattai ni matti," tradesman, or master of the sick. The Fijians are by far the most intelligent, and, medically speaking, knowledgeable of all the native races inhabiting the numerous isles of the intertropical South Pacific. They possess many valuable medicinal herbs and medical secrets, their knowledge of which they are by no means adverse to impart to those who possess their confidence and esteem; in fact, such was my experience. Soon discovering their amatory tendencies and inclinations, and observing little or no gonorrheal affections among them, I inquired the reason, when they informed me: drinking the "Yangona Naviti" was a specific for all urethral and vaginal discharges and diseases of a contagious character, which I subsequently proved and ascertained to be a fact. Anxious to see and learn the manufacture of this important and valuable specific, my wishes were complied with. Being conducted to the "vale" house of a powerful chieftain named Tui Cakou or Tui Vanua Lever, at Somo-Somo, I was a witness to the perfect and complete preparation of the "Yangona Naviti." A large clean wooden bowl standing on four legs, called a "tarcona," made out of one solid piece of wood of the vessy tree, having a perfect polish caused by frequent use, capable of containing five to ten gallons, was brought in and placed in position before the assembled chieftains. A number of young girls with teeth as sound as ripe acorns, and white

as bleached coral, were placed around the "tarcona," and ordered to proceed with the manufacture. A large yangona root was then laid before them, scraped clean and cut into moderate sized pieces. Each girl took as much of the root as her mouth would comfortably contain, and commenced chewing vigorously. When the chewing was completed, *i. e.*, the root reduced to a pulp, the mass was removed from the mouth and placed into the "tarcona." After a sufficiency had been chewed, water was poured into the mass and all thoroughly mixed together, the fibers of the root being separated from the liquor by straining. The strained liquor had now the appearance of brown soap suds. A cocoanut shell called "mbelo," containing about a pint, was filled with the liquor and handed to the chieftains, according to their rank, and drank off with apparent gusto—each chief emptying his "mbelo" at one draught before returning it to be refilled and passed to another. The root I ascertained to belong to the order piperacea, being the piper methysticum. Not admiring the salivary mode of manufacture I had just witnessed, I determined to try a plan of my own, and see if a more cleanly and civilized style of preparation would not have the same therapeutical effect as the "ma-ma," or masticatory process. Obtaining a quantity of the root, drying and grating it, and mixing the gratings with cold water as required, produced a drink far more pleasant and enjoyable to an educated white man's ideas of correctness, and also of equal potency to the chewed mass. The root is easily grown in Fiji, and I should think could be readily cultivated in all tropical countries possessing a sufficiency of moisture or rainfall. The plant is propagated by cuttings from the stems, in precisely the same manner as the grape-vine—thus leaving all the roots available for home use or commerce. The root carefully dried retains its medicinal virtues; also keeps well.

Upon my return to civilization, I treated some forty cases of gonorrhea, male and female ulcerative leucorrhea, vaginitis and urethritis, with the happiest results. In no single instance did the preparation disagree with the patient; never caused eructations or gastric disturbances. In fact, drinking the cold infusion produces a pleasant effect upon the whole, leaving a warm, aromatic, grateful taste in the mouth. Unfortunately,

my stock of the yangona root became soon exhausted, and hitherto I have been unable to renew my stock to enable me to continue my experimental researches. Of this I am fully and perfectly satisfied, that in the contained juices of the roots and lower portions of the stems of the "Yangona Naviti" piper methysticum we possess a most valuable adjunct to the materia medica for superseding all the ordinarily used remedies for the easy, safe, and successful treatment of gonorrhea and allied affections, being pleasant to take, always tolerated by the weakest and most susceptible stomachs, and leaving no troublesome gleet discharges as sequences to follow its judicious exhibition.

Archebiasis, or Spontaneous Generation.

BY S. P. CUTTER, M. D., MEMPHIS, TENNESSEE.

BELOW will be found a descriptive list of a dozen different solutions, of oxides, salts, acids, and alkalies, all but one specimen giving unmistakable organic developments, in great perfection and beauty, in many instances wholly unexpected.

Quite a number of other preparations, made up about the same time, have proven barren of results, neither crystals nor any other deposits taking place.

Microscopic investigation into the mysterious researches of the following described lists far exceed any anticipated results, when these investigations commenced.

New theories and ideas will, of necessity, follow results so unexpected, and I may say marvelous, brought about without the employment in any way of organic matter.

The reader will be the better able to judge for himself, when he reads my details, though very imperfectly rendered, the milk in the cocoanut being the main object of these descriptive researches, instead of the cocoanut with the "hair" on it, unbroken.

In some instances a few months, and in others six or twelve months, were necessary to bring about the results given.

ZYMOTIC FUNGI—SERIES NO. 2, INCLUSIVE.

(1.) Solution of acetate of zinc, twelve grains to six ounces of water, made up for an eye-wash, after standing

several months, had a large quantity of light-colored deposit at the bottom, which led to microscopic investigation, with the following results, under 500 diameters.

The sediment proved to be "mycelum" mainly, the threads of indefinite length, regular in outline, apparently hollow tubes; some of them, however, are beaded or baccated, as though the tubes were filled with round bodies, in single file, just large enough to fill the tubes, making them very striking objects under the instrument.

Besides these, there are some coarse cells, resembling very closely those seen in celery and other esculent and succulent vegetables; these cells are of a brownish color.

In the above preparation we have carbon of the acetic acid, as a basis of structure, also hydrogen and oxygen, constituting the elements essential to the ternary or amylaceous compounds of vegetable life. Azote, so essential to cell formation, is wholly wanting in the mixture; in consequence, nothing higher than an imitation of a true plant could be expected.

Formula of the salt of zinc is—



The fact is worth knowing that a weak solution of the above salt of zinc is unstable and unreliable, from zymotic degeneration. Next in order is—

(2.) Carbolic acid solution, fourteen grains to six ounces of cistern water, "pure," made up also for medicinal use. After several months this preparation also contained a large amount of deposit, of a light color, not unlike the zinc in appearance.

Microscopic analysis gave most perfect "penicilium glaucuni," with clusters of cells, resembling very much clusters of grapes on their stems. These cells, "tarula," have sharp, clear greenish nuclei, refracting light strongly. They vary very much in size, from very minute to the size of "beer fungus." Some other large dim cell-like structures, without nuclei, made their appearance; also some necklace beads or fingered yeast could be seen; "baccated harmicumi," no doubt. Also cells or corpuscles resembling closely leucocytes or white blood, mucous, or pus corpuscles. Other patches of coarse ribbon or tape-like fibers—resembling coarse wood in structure, all joined together, completes the descriptive list on the field of view.

The formula of the acid is—



The above acid has very weak acid reaction, though one of the most energetic remedies in full strength known to "materia medica."

This acid can not be called organic, although originally of vegetable origin long ages gone by.

It contains the elements of starch and sugar, but not in the equal proportion of those.

CREAM OF TARTAR SOLUTION.

(3.) Twenty-six grains to eight ounces of water, of several months' standing, contains great quantities of white cloud-like flocculi, tough and adherent, floating in the bottle, not on the bottom, as in case of the others described.

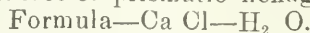
Microscopic appearances are very beautiful and striking, consisting of very fine "leptomitous filaments"—nuclei—all interwoven or reticulated, very much like lace work, almost invisible under 500 diameters.

Besides, there are masses of coarse brown ribbon-like parallel adherent fibers, one-half inch in diameter, under the above power; innumerable "tarula corpuscles" of variable sizes, some coarse, united lineally, like beads on a string; they all have sharp nucleated centers shining like so many diamonds, and of a deep green color. In point of beauty, they surpass any other specimen examined.



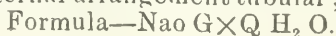
In the above formula I find the starch elements with potash, an essential element in organic nature.

(4.) A solution of the chloride of lime, twelve grains to six ounces of water, produced no organic results; instead, perfect masses of prismatic hexagonal crystals.



SOLUTION OF CARBONATE OF SODA.

(5.) About the same strength as the others, three months old, under the microscope, gave large bundles or fasciculi of coarse fibers, from forty to fifty in a bunch, of indefinite length. At one end the rods are even and square, as though it was the starting point of growth. They are smooth and taper to a point, and as coarse as the human hair; internal arrangement tubular; color greenish.



In the above we note two elements only of vegetable life.

SOLUTION OF CHLORATE OF POTASH.

(6.) Of similar strength and age of the last named, under the microscope, shows vegetable structures similar to the last described; the only difference being, the last named have a cell-like structure. I find no drawings in any of the books anything like these.

(7.) A solution of muriate of ammonia, fourteen grains to six ounces of water, of three months, has a dark detached sediment scattered over the bottom of bottle.

Microscopic features—Coarse and fine fibers are conspicuous, of various shades of color; the coarser ones having cells as though composed of lineal cell arrangement, not unlike muscular fibers, the fine ones resembling the human hair. Some other patches of unformed matters, evidently “plastic particles,” could be seen.

Formula— $N H_4 Cl$.

In the above, I find two very important organic elements, and the third one is found in animals.

(8.) A mixture of sugar of lead and sulphate of zinc, twenty grains each, to one quart of water, made up for an eye-wash, after keeping about a year, has but little sediment or deposit, hence is quite permanent and reliable for medical purposes.

This specimen has organic fibrous rods similar to some already described, together with masses of “nebulous,” or unformed matter, with minute cells or globules, having sharp shining centers, highly refractive of light; they might be called “physical constants.”

Formula— $Pl O_1 C_4 H_3 O_3 \times Q H_2 O \times Z O_1 S O_3 Q H_2 O$.

This formula gives three organic elements.

SOLUTION OF CAUSTIC POTASH.

(9.) Four grains to six ounces of water, made up five months, gave no evidence of any sediment until the past two weeks, which now contains a considerable quantity of beautifully white cloud-like “flocculi,” floating in the liquid, not at the bottom nor at the top trough, and difficult to detach a specimen while floating.

Microscopic analysis proves this to be very fine “nuclei,” branching extensively, and so transparent as to be almost invisible under high powers; there is, besides,

great quantities of "tarula," or "yeast fungus," and some other sedimental matters, unorganized as yet.

Formula— $K O \times H_2 O$

In the above we find a metal combined with oxygen in a solution of water. The results in this case, to say the least, are very astonishing, and could not have been anticipated.

SOLUTION OF COMMON SALT, OR CHLORIDE OF SODIUM.

(10.) Same strength, made four months ago, has now a dark sediment, not large in quantity.

The microscope shows threads of nuclei of great length, hyaline, no cell arrangement; also large and small corpuscular bodies, resembling oil very closely, though I think they are "tarula."

Formula— $Na Cl$.

This is a hyaloid salt, of two elements, no organic element in it, though salt may be found in animal bodies not in plants.

SOLUTION OF SULPHATE OF IRON.

The same strength as the last, six weeks old, has a considerable brownish sediment.

The microscope reveals branching "nuclei," five transparent "leptomitous" threads resembling the potash, only branching more, and less reticulated, some beaded strands, coarse, tubulated branches; also "torula."

Formula— $Fe S_3 \times H O$.

The reader will now be able to decide for himself the number of organic elements there are in the formula.

SOLUTION OF ACETATE OF LEAD, OR SUGAR OF LEAD.

(12.) Eight grains to four ounces of water, two months old, has detached masses of sediment at the bottom.

Examination under the glass gives almost exactly the same "nuclei" as described in the potash, no fungous corpuscles as in the iron and potash; quantities of minute space-like bodies, too fine, evidently, to be considered organized. Perhaps they are the basal elements of crystals, *i. e.*, "physical constants," so called by myself only, so far as I know.

Formula— $C_4 H_3 O_3 \times Pl O, \times H_2 O$.

This last formula will also be readily comprehended by the reader, who has scrutinized carefully the preceding formulas.

None of the foregoing experiments are copied from any

other person's experiments or researches. So far as they go, they are original with myself, and at first more accidental than anticipated, or "aprieu" concept.

A little theorizing at this point may not be out of order.

It has occurred to me in making these investigations, that the first step toward organic life, from the inorganic, is the "crystalloid," it being the first step in "morphology" from "chaotic confusion," if the term be "allowable," or the connecting link between unformed molecular matter, and the colloid or cell structure, viz: rounded outlines in contrast to straight angles and planes, and no curves, the "crystal."

The most normal "type" of all the materials used in the above researches is the "crystalloid;" the simple "radical" of all organic forms of the vegetable kingdom, without any exception, is the most perfect of all crystals, the "diamond" or "carbon radical."

My experiments illustrate the metamorphosis of "nebulous matter," atoms, molecules without form, but not void to that of "form and order," the "crystal," the first step in "morphology," before alluded to.

The second style, by continuing the forces under new and more powerful agencies, and in organic, the "colloid cell;" the straight lines, converted into curves, the old system abandoned or given up to the new departure, results of which have already been given.

Of course, new conditions must be brought to bear; more potent than the old ordinarily the more stable; the "potential" dwelleth in the atoms, relieved of "cohesive embrace," the undisturbed chaos of the primeval universe or "cosmos."

My experiments commence with the "potentials" in solution, unincumbered with cohesive attraction in any way, hence free to assume either of the two forms before them, to be governed by conditions supplied by myself. In some of my preparations the potentials remain permanent; in others they are subordinated to others more potent; that is, "disturbances."

Our molecules are manipulated, as clay in the hands of the potter, to shape as he thinks best.

So it is, the forces in the various solutions, in precipitating their solid elements, meet with controlling factors, causing results already given.

What it is that directs the forces that end in any given form of crystal, I am not competent to determine, any more than in the other case; *i. e.*, the "cell" of rounded outlines.

Whether there are germs or eggs in the case is yet an open question.

We might reasonably conclude that the forces that produce any given form are indwelling in the ultimates themselves, though subject to outside influence, such as light, heat, magnetism, electricity, gravity, ozone, and, perchance, something else we are ignorant of at present.

To say exactly what it is that brings about or conveys out this work of differentiation, is beyond my present state of knowledge.

In our stronger solutions, gravity may carry down our molecules in mass, straight to the bottom; which means, "straight lines," when once assumed, never deviate until all the materials are used up in the crystal, and the process ceases.

In the water solutions, when the molecules or atoms start for the bottom, they may not be heavy enough in mass to be overcome by gravity readily, and meeting with other forces which turn them out of their "straight lines," "wanted to be assumed," they deviate, which is fatal to the "crystal," and forced to take on the only other alternative, the "colloid" or cell-form.

As in the case of straight lines, curved lines, when once started, they can not deviate. They must continue until the materials are all used up, unless something may arrest the process before the supply is fully exhausted.

On the one hand, as before suggested, gravity may govern the process; on the other, electro-magnetism, in co-operation with gravity, or "chemical forces, may come in for a share of the work."

In the one case, the type may be the very highest, and most perfect, the "crystal." In the other, the very lowest type may be the result, from the fact that some elements were lacking in each experiment for a perfect organism.

In the weaker solutions, oxygen, in warm weather, may enter as "ozone," and favor fermentation, my assumed "parent" of the organisms under discussion. In the stronger solutions, oxygen has no action, no influence, as that agent is not essential to crystal formation.

No higher organic "evolution" could be expected from solutions under consideration, as none of them contained the necessary elements to form "protoplasm," the physical basis of "life," according to Mr. Huxley.

SELECTIONS.

Mono-Bromide of Camphor in Insanity.

DR. MANN, late Medical Superintendent New York State Emigrant Insane Asylum (Detroit *Lancet*), has been using this remedy in mental diseases, more especially in cases of hysterical mania in women, with the happiest results. From a long experience with its use, it has proved to be an excellent sedative of the cerebral system, and also at times, as an hypnotic. In cases of dispomania it has proved a very valuable adjunct to the other treatment pursued, quieting the restlessness and excessive nervousness much better than any of the other bromides. It diminishes the number of pulsations of the heart, and lowers the temperature of the body. With the exception of cases of dipsomania, the writer has used it with more success with females than with males. In one very violent case of hysterical insanity, with nymphomania, in a young unmarried lady of twenty years, a most satisfactory cure was obtained from the use of the mono-bromide of camphor, in doses of four grains, in capsules, three times a day, with warm baths, and the use of the constant current as central galvanization. Another case—a young lady of twenty-two years—was admitted, with acute mania of very violent type, from no assignable cause. Upon her admission the tongue was furred; the bowels constipated; head hot; pupils widely dilated. She had hallucination of sight and hearing, and delusions relating to her lover. She destroyed everything within her reach, and evinced great muscular strength, which rendered her a formidable patient to deal with. She was put in warm baths, and chloral and morphine were administered, but she did not sleep; all ordinary treatment proving unavailing, and a general hyperæsthesia, inducing the patient to tear her clothes off, it was determined, as an experiment, to put the patient on the mono-bromide of

camphor. The doses employed were at first two grains, three times a day, and subsequently four grains, three times a day, all other medicine being, for the time, abandoned. After the first few doses, the temperature and the frequency of the pulse were lessened, and the pupils were reduced to their normal size. The patient soon began to sleep and eat, and the hyperæsthesia of the body disappeared, so that she stopped tearing her clothes off. The intense muscular restlessness, which had previously characterized her, also disappeared. The mental faculties improved, and at the expiration of thirteen weeks she was discharged, perfectly well, and has remained so up to the present time. In this case the remedy was persisted in for over two months. In some cases where the mono-bromide of camphor has been used, Fothergill's solution of hydro-bromic acid has been used in connection with it, and always with the best result.

Uterine Polypi and Fibroids.

DR. CALDWELL, in the *Chicago Medical Journal*, gives the following notes from Berlin :

I saw Professor Langenbeck operate on a woman for the removal of a uterine fibroid polypus that had descended into the vagina and filled this organ so completely that the evacuation of both the rectum and bladder was completely obstructed.

The growth was so large that he was unable to pass the ecraseur over the entire mass to its cervical attachment, and hence he had to pass the chain of the instrument around its lower segment, and remove it in three separate portions.

The last was so large that he had to extract it with a pair of obstetrical forceps. He said: "Whether these growths be solid, soft or cystic, there are only three modes of removing them that I recognize as proper to adopt, and these are, the knife or scissors, the ecraseur and the galvano-cautery. When they are attached high up in the uterus, I do not like the galvano-cautery, for the reason that you can never be really certain what you are burning, and you may destroy tissues that will lead to disastrous consequences."

The use of the ligature for the removal of these foreign bodies he especially condemned. In the early years of his professional life, he had seen two patients die of septicæmia following the removal of a uterine polypus in this manner.

We must remember, in all our operations upon the uterus, that although we have to do with an organ that will tolerate a good deal of mechanical violence, that we have also to do with a mucous surface that will the most rapidly absorb effete matter of any tissue in the entire body; and that when a polypus is ligated it soon becomes a putrid mass, from which the whole economy may become rapidly contaminated. The twisting off of polypi he also considers a bad practice, and has seen at least one case where the extensive laceration of the mucous surface of the womb attending the operation resulted in a mentritis, from which the patient died.

Professor Schroeder had in his wards at the Charite, this winter, some interesting cases to illustrate his management of different forms of uterine fibroids. In our treatment of these cases, he says, we should remember one fundamental rule, which is, that in the history of every such case there usually comes a time when the morbid growth will cease to increase in size, begin perhaps to undergo a retrograde metamorphosis, and become in time entirely innoxious as far as the well-being of our patient is concerned. Directly opposed to this are the facts connected with the history of most cases of ovarian cysts. Their tendency is ever to increase in size, and their removal will sooner or later be imperatively demanded. Keeping these facts in view, we seize upon the most appropriate time for our operative interference. In the management of cases of uterine fibroid, he says, investigate your case accurately as to this fact. Is its attachment situated upon the lining membrane of the *body* of the womb, or upon the cervix uteri. If it has its origin from the body of the womb, you are to consider it a *noli me tangere*, unless it be the direct cause of symptoms that are likely to prove dangerous to the life of the woman. On the other hand, if it spring from the cervix uteri, you may operate on it in almost any way with comparative safety.

To arrest the hemorrhages that accompany these cases, he swabs out the inner surface of the womb with either

tincture of iodine or a solution of one of the astringent salts of iron.

A question in which I had been greatly interested, and upon which I have interviewed everybody, is the value of the hypodermic injection of ergotine in the treatment of uterine fibroids.

Professor Schroeder says that he has often seen cases greatly benefited by this treatment, but has never seen a case entirely cured by it. By its use the hemorrhage will often cease, and the tumor become greatly lessened in size. To test the remedy he says you must use at least one hundred injections. He makes them into the cellular tissues of the abdominal walls, and repeats them as often as every alternate day. As so protracted a use of an agent that is often very painful, taxes to the utmost the patience of both physician and patient, few carry it out thoroughly.

Braun, of Vienna, makes these injections into the outer aspect of the thigh, where they are better borne. He uses also Bourbellon's ergotine, and none other, as he says you never have an abscess follow its use. Its name, I believe, is derived from a Swiss chemist who manufactures it.

Dr. Routh, of Dorset House Hospital for Women and Children, in London, is the greatest enthusiast of any I have met in Europe as regards the efficacy of his treatment of intra-uterine fibroids. His plan is to first puncture the tumor by passing a sharp-pointed instrument into it about the size of a number six English catheter. The depth to which he makes this puncture will depend upon the size of the tumor, but will usually be to about one-half of the thickness of the growth. After making his puncture, he introduces into the hole thus made a wire of nearly the same size, heated to a red heat. He claims that in this way you can excite an inflammatory change in the body of the fibroid that will lead to its absorption, and that too without any of the dangers of a septic process following the procedure, which would be likely to occur if you attempted to accomplish the same object in any other way. He says that he has never failed to benefit a case that he has treated in this manner.

Treatment of Malignant Scarlatina.

(Clinic of Dr. Bouchut.)

WHEN scarlatina is benign, when its course is regular, the treatment should be confined to regulating the hygiene. In this regard, it should be indicated that it is necessary that the child should be only lightly covered in his bed, notwithstanding the opinion of the people who, under pretext of causing the eruption to "come out well," are always ready to overload the patient with coverings. Now, this point is not an insignificant one, for by this vicious practice the temperature of the patient may be raised in notable proportions. In malignant scarlatina, on the contrary, the intervention of the physician should be very active; there is one important element that must be especially considered—the temperature. When this rises to 41° C. (106° F.), and the eruption appears in livid, cyanosed patches, then we have to deal with a form of extreme gravity, which may also be recognized by a sign that Dr. Bouchut indicated long ago: When in the course of a normal eruption we make a line upon the skin by drawing the finger nail over it with some force, this line remains white for some time because of the contraction of the capillaries under this excitation; in very grave cases the skin ceases to be thus impressionable (*chatouilleuse*), the capillaries no longer contract, the white line is not produced; there is a paralytic stasis of the blood. The sign is of the greatest gravity, and, according to Dr. Bouchut, always indicates that the case is a fatal one when it is treated by the ordinary methods. There is only one single method of treatment that can save a certain number of these cases, this is Currie's method; that is, to say, the employment of cold water. However contradictory it may appear (for so far from favoring the eruption, it would seem that the means employed ought to hinder its development), it should be known that we can save two-thirds of these patients in this way, and we must not fear to assume the responsibility of using a process so contrary to general opinion. Currie's method, completely carried out, consists in plunging the patient into a cold bath at least three times a day, according to the lowering of the temperature obtained. Dr. Bouchut thinks that the same results may be reached in a much easier and more practicable manner

by the use of cold ablutions that may be repeated upon the patient while he is in bed, every hour or every two hours. The amelioration thus obtained is almost always very rapid, and greatly facilitates this method of treatment.—*St. Louis Clinical Record*.

Recent Researches on Cerebral Surgical Pathology— Trepining and Cerebral Localizations.

(*Journal de Med. et de Chir. Pratiques*, Mars, 1879.)

THE editor of the *Journal* has recently written a work, *Trepining Guided by Cerebral Localizations*, and in the March number he gives a review of recent progress in this direction, from which we condense the following:

He considers trepining not to be a formidable operation, and that it may often be practiced with success and profit.

Clinical facts show that a shock limited to the anterior half of the parietal bone produces divers forms of paralysis. An examination of 13,000 cases of wounds of the head that occurred in the late civil war in the United States, shows 173 cases of localized paralysis, in 139 of which the details were given, showing that the parietal bone had been affected, and, consequently, the cerebral cortex situated beneath it. These paralyzes of the arm, leg, both lower extremities, the fore-arm, etc., were in certain cases caused to disappear by operation; the earlier the operation was performed, the more certainly was this result obtained.

Dr. Lucas-Championniere thinks he has demonstrated the capital importance of the following proposition:

"There is a region of the brain that is motor, composed of centers upon which voluntary movements depend; when traumatism affects it, the paralysis that supervenes indicates the portions of the brain involved in the injury."

The portions of the cortex in front of and behind the fissure of Rolando are those recognized as motor. The line over which trepining may be practiced successfully for the relief of localized paralysis is found in this way: measure a line seven centimeters (2 3-4 inches) horizon-

tally backward from the external angular process of the frontal bone, then another three centimeters (1 3-4 inches) perpendicular from the posterior extremity of the first line, then connect the superior extremity of the second with a point situated fifty-five millimeters (2 1-6 inches) posterior to the bregma. Trephining over the oblique line thus formed will relieve pressure from the motor tract, according as it is practiced in the upper or lower portion of its extent. He thinks that in the future this line may be made use of in relieving spontaneous as well as traumatic lesions. The operation itself is easier of performance than ligature of the great vessels. It is of little gravity, even in hospitals, when the antiseptic method is employed.

Dr. Duret has recently published an important work—*Experimental and Clinical Studies of Cerebral Traumatisms*—in which he gives us a new theory of concussion of the brain. He believes, from his experiments, that the cerebro-spinal fluid conducts the force of a blow received upon the head to the medulla oblongata, or to the ventricles, inflicting injury, severe or trivial, according to the point receiving the blow, and its force. If the force transmitted thus be violent, paralysis may be complete; if the lesion be slight, exaltation of function takes place. From inflammatory reaction we may observe symptoms of exaltation followed by paralysis. Hemorrhage produces the same symptoms as shock. Solid bodies, spiculæ of bone, act by pressure as well as by irritation. It is easy to conceive how necessary it is to remove them, for they have a direct local and a general action upon the nervous system.

One of the most remarkable points brought forward by Dr. Duret, is the demonstration of the part played in head troubles by direct irritation of the dura mater. The exasperated sensibility of this membrane determines reflex phenomena in the muscles—spasms and contractions—troubles of pulse and respiration, and vaso-motor changes in the cerebral hemispheres (drowsiness and coma).

Henceforth, it may be said that we have acquired a better understanding of the value of symptoms due to lesions of the nervous centers, and the necessity of removing all sources of irritation and compression from the intra-cranial soft parts, including the dura mater.

Treatment of Scarlet Fever.

THE late Prof. George T. Elliot, in a lecture on this disease, gave the following method of treatment: To bring the eruption out, if it has not already presented itself, order hot baths and blankets. Give nothing to eat at first in the eruptive state, and only the simplest nourishment the first day. Patients experience great relief from baths, and the application of cold cream, or mutton tallow over the whole body. Visit the patient twice a day. By pouring a pitcherful of cold water over the back of the neck, especially when the glands are enlarged, great comfort is experienced. As a gargle make use of chlorate of potash or soda. Pieces of ice are good in the mouth. Sprays thrown in with Richardson's instrument, of lime water, solutions of alum and sulphate of zinc, are beneficial. As a palliative to the throat, the vapor from slacked lime can be recommended. Strong beef tea, with opium, may be thrown up the bowel. Begin to feed the patient from the second day of the eruption with animal essences. If the tonsils are enlarged and the pharynx exhibits much redness, with diphtheritic exudation, the physician has a right to say that things look bad. If the throat symptoms do not mitigate on the fourth or fifth day, the voice being affected, then one feels that there is a good deal of danger. When the kidneys show, by peræmia, desquamation, or transitory albuminuria, then there is a twofold danger. Always examine the urine when the patient has kidney disease; the treatment should be directed to the skin and bowels; when the latter are loaded and constipated, give powerful saline cathartics.

To convalescing patients the use of iron is beneficial. The bisulphites have been recommended, but from experience they can not be advocated. Belladonna is not always a prophylactic, although, on account of its innocence, and a feeling of satisfaction to the practitioner and family, it is well to administer it.—*New York Medical Record*.

The Contagium Vivum.

THE best paper on the *contagium vivum*, with which we are acquainted, was presented by Professor J. L. Cabell,

M. D., of the University of Virginia, in his address on State Medicine and Public Hygiene, as chairman of this section in the American Medical Association at Buffalo. We extract the conclusion from the address as it appears in the "Transactions of the American Medical Association" for 1878:

"When we find innumerable analogies between the phenomena of the contagious fevers and those connected with the development and life of certain low organisms, analogies so numerous and so close that every peculiarity in the manifestation of the fevers, as to the mode of development and spreading, will be found to be susceptible of interpretation in terms of the doctrine of a *contagium vivum*, and many of them not susceptible of any other explanation, and that moreover a positive demonstration has, it is universally conceded, been given in the case of splenic fever, not to insist on the almost equally conclusive proof in the case of relapsing fever and septicæmia, nor upon the apparently conclusive demonstration, given by Chauveau and subsequently confirmed by Sanderson and by Braidwood and Vacher, that the contagium of vaccinia and variola consisting of transparent vesicles, first recognized by Lionel Beale, not exceeding, according to Sanderson, the 1-20,000 of an inch in diameter, it does seem to me that a very strong case has been made out in proof of the general doctrine in question.

"Those who are prone to reiterate the assertion that no positive demonstration has been given of a living contagium in the case of typhoid, typhus, or the malarial fevers, and who seem to take for granted that until such demonstration has been given it is more logical to doubt, if not to deny, the possibility of such a mode of causation than to hold it as a provisional hypothesis, forget that ocular demonstration may be absolutely precluded by reason of an ultra-microscopical minuteness of the particles; that moreover, between the microscopic and molecular limits there is space for countless gradations of beings, and that after all inferential proof may be quite as conclusive as sensible demonstration; in some cases indeed much more so, the liability to commit logical fallacies in the one case being balanced or more than balanced by possible errors of interpretation in the other. What would be thought of the scientist who would doubt, not to say deny, the truth of the undulatory theory of

light on the ground that the supposed elastic medium, whose motions are believed to constitute the light of the universe, is itself invisible, impalpable, and absolutely imponderable, that we can not *demonstrate* its presence nor know any thing of its essential nature? The assumption of its existence suggested by observed analogies between many of the phenomena of light and the known effects of the undulations of ponderable fluids not only furnishes a satisfactory explanation of all the previously known facts, but has enabled competent philosophers to predict and thus discover other more recondite phenomena which had escaped direct observation. No proof could be stronger than this. In like manner the extension of the doctrine of contagium vivum from infectious fevers in which positive ocular demonstration of its presence has been given to others of the same class, in regard to which ocular demonstration may be precluded presumably by reason of the extreme minuteness of the particles, is fully justified by the uniformity of nature. The doctrine in question thus fulfills every test of a legitimate scientific theory. It assigns a cause which as we have seen is true and appropriate to the effects to be explained, while the facility of its application to the solution of all the phenomena of the infective fevers shows it to be also adequate in extent."

Local Uses of Tannin.

DR. G. P. HACHENBERG, New York *Medical Record*, reports several cases of the use of this remedy in prolapsus uteri, where other means had failed to afford relief. His method is as follows: A glass speculum is introduced into the vagina, so as to push the uterus into its place. Through the speculum a metallic tube or syringe, with the end containing about thirty grains of tannin, is passed. With a piston the tannin is pushed against the uterus, the syringe withdrawn, and the packing neatly and effectually completed with a dry probang, around the mouth and neck of the womb. After the packing is completed, the probang is placed against the tannin, in order to hold it, and the speculum is partially withdrawn. The packing is now fully secured, and the instrument removed.

The application of tannin holds the uterus firmly and securely in place, not by dilatation of the walls of the vagina, but by corrugating and contracting its parts. At first the application may be made weekly; finally, but once or twice a month. It not only overcomes the hypertrophy and elongation of the cervix, but even, the writer thinks, induces a slight atrophy of the parts. As a remedy for leucorrhœa, where the seat of the inflammation is at the mouth of the womb, or within the vagina, it actually gives speedy relief. The doctor also reports a case of chronic ulceration of the rectum which was cured after a few weekly packings of tannin. He has found, moreover, that, in affections of the throat, direct applications of tannin to the diseased parts gives satisfactory results. In a case of extraordinary hypertrophy of the tonsils, preparatory to the operation of extirpation, tannin mixed with tincture of iodine to the consistency of syrup, was applied with the effect of so diminishing the hypertrophy that a surgical operation will, in all probability, not be necessary.

No remedy has given such satisfactory results in certain forms of chronic ophthalmia and opacity of the cornea, as tannin once a week, placed under the eyelids—pure well triturated tannin. An aged lady, who had chronic ophthalmia, was relieved by one application; another, who was blind from opacity of the cornea and chronic ophthalmia, recovered her sight mainly from the local use of powdered tannin.—*Boston Med. and Surg. Journal.*

Malignancy in Tumors.

BY P. W. VAN PEYMA, M. D.

* * * As to the character of cancer cells, I quote also from Green: "The cells are characterized by their large size, by the diversity of their forms, and by the magnitude and prominence of their nuclei and nucleoli. In size they vary from 1-600 to 1-1,500 of an inch in diameter, the majority being about five times as large as a red blood corpuscle. They are round, oval, fusiform, polygonal—exhibiting in short every diversity of outline. * * * The nuclei, which are large and prominent, are

round or oval in shape, and contain one or more nucleoli. The nuclei are perhaps most frequently single; two, however, are frequently met with, and in the softer and more rapidly growing cancers, they may be much more numerous. The cells rapidly undergo retrogressive changes, hence they usually contain molecular fat. They are many times exceedingly destructible, so that sometimes more free nuclei than cells are visible. Cells precisely similar to these are met with in other morbid growths, and also in normal tissues. *There is thus no specific "cancer cells."* It is the general character of the cells, together with their mode of distribution in the meshes of a fibroid stroma, that determines the nature of the growth to which they belong. "The appearance presented by these cells grouped within the alveoli of the cancer sometimes closely simulates in the earlier stages of growth that of simple adenoma," only here the cells are less irregular and more like the normal. It will be noticed that the quotation denies explicitly the existence of a *cancer cell*, that is, a cell characteristic of this growth. On the contrary it is exactly this want of anything characteristic; the great variety of shape and size and condition, which is to any extent peculiar. Add to this the arrangement in alveoli, formed of connective or fibrous tissue, and we have all that is in any sense characteristic of cancer, from a histological standpoint. And even this is not as much so as could be wished. We have already noticed its resemblance to adenoma. Wagner says, "The alveolar structure of cancer was long regarded as especially characteristic. This, however, is not the case. Adenoma also, and many sarcomata and cystomata, show an alveolar structure. To draw conclusions from the alveolar texture of new formations, it is always necessary to consider the structure of the mother tissue." And, in summing up, he concludes as follows: "From these characters it follows that at the present time there are no strict histological peculiarities. At the present time the notion connected with cancer is especially clinical, not anatomical."

In now closing our anatomical description of sarcoma and cancer with a short notice of the course and relation of the blood-vessels and lymphatics, we are led to remark a very interesting anatomical difference between the two growths; and one having an important bearing in path-

ology. In the sarcoma the vessels are not supported by a stroma, as is the case in cancer, but ramify among the cells of the growth, hence the facility with which these tumors become generally disseminated. On the other hand, according to Cornil and Ranvier, the lymphatics communicate directly with the alveoli of cancer. This explains the tendency of cancer to infect lymphatic glands.

We now come to the subject proper, viz: malignancy. Its definition has already been given—a tendency to spread rapidly and to recur after removal. The questions now are upon what does this depend, and why are certain growths more malignant than others. From what has preceded our answer may possibly have been anticipated—that it depends upon the transmission of certain elements, probably cellular, to different parts of the body. This is possible and actually occurs in three ways.

I. Locally by simple extension of the growth.

II. By means of the lymphatics.

III. By way of the blood-vessels.

“As a general rule, the more juice, or cells a growth contains, and the richer it is in blood-vessels and lymphatics, the more quickly will it infect the lymphatic glands and internal organs,” and conversely. In addition to this another point must receive consideration, viz: the difference in the mode of growth of tumors. The proportion of central and peripheral growth is not the same in all tumors. Cancers and sarcomata are characterized by a predominantly peripheral growth. Other things being equal, a peripheral growing tumor is more malignant than one whose growths is central. The reason of this is obvious. A centrally growing tumor has its active proliferating cells surmounted by a zone, in many instances a capsule of inactive, if not dead material; while in the case of the peripheral growing tumor the active multiplying and infecting cells are at the periphery in immediate contact with the surrounding tissues. The absorption of the elements of the primary growth has, according to Wagner, been demonstrated. He says: “For some cases it has been demonstrated with certainty that cancer masses as a whole, and cancer cells especially, which are free in the blood-vessels, having been transported hence and deposited in other parts, become the cause of cancerous formations.” He gives similar testimony as to

their entrance into the lymphatics. Their mode of action after reaching the part is, according to Green, "by virtue of an influence on the cells of the tissue where they lodge, which may be termed a spermatie influence, and which is strictly comparable with that of the sperm cell in the ovum." That is, it excites the cells of the part to a peculiar activity and multiplication. Of course a similar influence is supposed in the local extension of the primary growth. The comparative frequency and extension of their infection explains the frequent heterology of malignant growths.

While all tumors are therefore probably more or less likely to recur after removal, those are especially so, which are abundant in cells; more particularly the small round cells (this because of their more ready entrance into the vessels); and are richly supplied with blood-vessels and lymphatics.

These factors we have seen to be in a great degree characteristic of cancer and sarcoma. The elongated cells being less fitted for absorption, we find the fibroid tumors recurrent in a lesser degree. The same may be said of the cells of epithelioma. In this connection Wagner says: "Especially do so numerous transitions seem really to exist between the so-called benign and malignant new formations that a fixed limit is at present, and perhaps always will be impossible."

It will have been noticed that in giving our view upon malignancy, no allusion has been made regarding constitutional predisposition. The question of the comparative importance of local and constitutional causes in the etiology of malignant growths must still be considered open, but the belief in the greater importance of local causes is daily gaining ground, and is even at the present day accepted by the principle pathologists. The most generally accepted view at present seems to be, that a certain constitutional predisposition probably exerts *some* influence in determining the peculiarly degenerative and destructive changes. This must, however, not be interpreted as implying any *specific* influence; but rather one, admitting of comparison with that low state of vital activity, seen in certain individuals of broken constitutions, where the tendency to a breaking down of tissues is general. In the study of malignancy we are again reminded in nature there are no sudden jumps from one

extreme to another, but always a gradual transition. One kind of morbid action gradually merges into an other. In a paper read before the Erie County Medical Society, two or three years ago, I arrived at somewhat similar conclusions. After asserting the gradual transition of hypercœmia into inflammation, and *vice versa*, I remarked: "In conclusion I will say, to my mind, inflammation is not alone in the fact of its gradual transition into other conditions. My conviction is settled, that, as we progress in our knowledge of the general principles of disease, the application of the 'law' of transition will be found to approach the universal." Examples or illustrations of this law are found on every side. The fact that authors speak of sarcomatous cancers and carcinomatous sarcomas shows that these growths occasionally merge into each other. Rindfleisch speaks of a mixed tumor which he says, "we must leave undecided, whether it is to be reckoned with the sarcomas or carcinomas." The gradual merging of an adenoma or glandular tumor, into carcicoma, has already been referred to. To quote Rindfleisch once more: "Certain authors," he says, "certainly move the idea of adenoma up and down the scale mentioned, in that they now assign it more to hypertrophy, now more to carcinoma; that however a motion up and down of this kind is possible, just proves the existence of this scale."

Wagner says: "Doubtless between adenoma and glandular cell cancer there are found the most manifold transitions." These he classes under the head adenoma carcinomatodes. One of the synonyms of cancer is "spongoid inflammation;" and Wagner, speaking of the two processes, says: "Of many cases (of cancer) especially of the stomach and mammæ, even after careful microscopical examination, it remains doubtful whether they belong here or represent chronic inflammations with strong cicatricial formation, or with simultaneous glandular hypertrophy."

Rindfleisch considers hard glandular cancer as dependent upon an interstitial inflammation of slow growth; the cellular products of which are metamorphosed into epithelial forms instead of into pus or connective tissue; this in consequence of an epithelial infection due to neighboring epithelial cells.

Much more might be said upon this subject of tran-

sition. And what has been said should have received elaboration and elucidation. But a little thought upon the subject will enable any one to carry this mode of reasoning in various directions, and that to a far-reaching degree.

In conclusion, let me call attention to one of the practical points intimately connected with the subject:

If the views contained in this paper are correct, any expert to whom we may hereafter carry a specimen for examination, will not say "this growth is malignant, or this growth is benignant and harmless." He will rather express his opinion in relative terms, as, for example, "The specimen which I have examined is more or less abundant in cells; their character, as to shape, more or less adapts them for absorption; the arrangement of its blood-vessels and lymphatics is such that they will or will not greatly facilitate absorption and infection of neighboring tissues; the extent of the degeneration and breaking down of cells, and the comparative number of multinucleated cells and the small round cells, to the exclusion of any decided tendency to elongate and develop, prove its more or less rapid growth and destructive power." The consequence will be that we shall watch all morbid growths with a view to their malignancy, being especially fearful of those possessing the above properties in a marked degree. The question will no longer be, is the growth malignant or benign; but to what degree is it malignant, that is, liable to recur, to spread and be destructive.

The main object of the paper has been, by means of an example, to call attention to the fact of transition as seen in pathology.

Many of the positions taken being contrary to the views held by the majority of medical practitioners, more particularly those who have not given the subject any special study, I have felt warranted in making numerous authoritative quotations.

In the opinion of the writer, more attention should be paid to general principles, both in disease and therapeutics. The result would be a diminishing amount of superstitious belief in specifics and a growing clearness of vision in matters medical.—*Buffalo Medical and Surgical Journal*.

MICROSCOPY.

AMERICAN SOCIETY OF MICROSCOPISTS.--This Society having accepted an invitation to meet at Buffalo, N. Y., will hold its second annual meeting in that city, commencing at 10 o'clock A. M., on Tuesday, August 19th, 1879, and probably continuing four days.

The Constitution of the Society, which was provisionally adopted at the Indianapolis meeting, will come up for discussion, amendment and adoption, at the Buffalo meeting. Persons who may attend are requested to bring to the meeting original papers on microscopy and allied sciences; also to bring microscopes, apparatus and objects which may be instructive to members, or useful at a soiree.

AMERICAN SOCIETY OF MICROSCOPISTS.—As this Society has elected to hold its second annual meeting in Buffalo, N. Y., on the 19th day of August next, the Buffalo Microscopical Club have invited the co-operation of kindred societies of the city, in the election and organization of a General Local Committee of Management; to take in charge all matters pertaining to the reception, and proper accommodation and entertainment, of this important National Convention.

The Committee on Transportation are perfecting arrangements with the various railroad authorities, which will enable members of the convention to secure passage, to and from the meeting, at reduced rates. To what extent this may be possible, they are not at present able with certainty to state; but they will hereafter issue an explanatory card, in time to enable all who purpose attending the meeting, to avail themselves of such facilities as they can not doubt, they will be able to obtain.

NEW YORK, *June 11, 1879.*

TO THE EDITOR OF THE CINCINNATI MEDICAL NEWS,—I trust you will allow me to make some remarks which seem called for by the communication from Professor J. E. Smith, on page 347 of your May number.

The words for which I am responsible, and which seem to have excited the gentleman not a little, are the following:

"Among other things he claims to have seen the nucleus of the red blood-corpuscles of mammalia in this way, about three years ago. The appearance of a nucleus, when the corpuscles are viewed in this manner, has long been familiar to observers, and it is safe to assert that no true nucleus can be thus demonstrated."

I must premise by saying that I do not deem the subject worthy of serious discussion, as regards its bearing upon the structure of the corpuscles, for I will go even further than saying "appearance of a nucleus" by asserting that there is not even so much as an "appearance" of such a structure to be seen.

Moreover, I believe I am right in saying, that, however original the observations and conclusions of Mr. Morehouse may have been, he was not the first one to examine blood in this way, or to suggest the nucleated structure from the appearance presented.

It is well known that Dr. J. W. Freer, of Chicago, made the same observations about or previous to the year 1871, and the writer was perfectly familiar with the matter long before he ever heard of Professor J. E. Smith or his modification of Beck's illuminator.

He is willing to admit that possibly he has not seen it in the full glory revealed by the above modified instrument; nevertheless he has gazed upon it with objectives of high balsam angle.

The facts here stated have been referred to several times,* in various journals, and what little attention they have attracted is more than they deserve.

I really must suggest to Professor J. E. Smith, that he would stand quite as well as an expounder of science, if he would use a little more consideration in his criticisms. It will be observed that no "loose statements" have been made, and this expression was quite unwarranted.

Respectfully,

R. HITCHCOCK.

A New Reflecting Telescope.

THE question as to the superiority of reflecting or refracting telescopes has been much discussed. Theoretically the former should, on account of their perfect achromatism, give more distinct images, but in practice

*I would give references but my books are not at hand.

refractors are always found superior in optical power to reflectors. MM. Paul and Prosper Henry have lately inquired into the causes of want of distinctness, or rather instability, in the images of the latter, and they attribute it almost wholly to the fact that masses of air of unequal density enter the tube, where they remain in whirling motion. The rays, incident and reflected, traversing this heterogeneous medium are much troubled, so that a confused image reaches the eye. The attempt to remedy the evil by making apertures at the lower part of the tube failed, the images being more confused than before. A better plan which has been adopted is to nearly suppress the tube, leaving only what is sufficient to support in position the object-mirror and the eye-piece; but this is efficacious only in calm weather. Reflecting telescopes have another grave defect, in that the reflecting surfaces tarnish rapidly through contact with air, moisture, dust, etc. M.M. Paul and Henry have sought to remedy these evils by closing the tube hermetically with a glass lens so cut as not in any way to affect the optical power of the instrument. In the mouth of a Newtonian telescope (0.10m. diameter and 0.60m. focal length) they fixed a thin lens of crown glass of the same size as the mirror, and very slightly concave. This form obviates the double image from a plane glass, and it destroys the aberration of the refrangibility of the microscopic eye-piece. The loss of light is very little. This instrument has given remarkable results. With it one can always resolve the double star σ_2 of cancer. The companion of Rigel is distinctly visible, and the image of a bright star is always much steadier than in another reflecting telescope of the same aperture, mounted in the ordinary way. MM. Henry are having constructed, on the same principle, a Cassegrainian telescope, of the largest dimensions. The small convex mirror will here be fixed directly to the interior surface of the crown glass lens.

Notes and Memoranda.

From our London (England) Correspondent..

EMPLOYMENT OF WET COLLODION FOR MICROSCOPIC SECTIONS.—M. Mathias Duval points out* the difficulty of finding any body which would firmly hold delicate objects, in

* "Journ. Anat. et Phys." (Robin), XV. (1879) 183.

which there are a large amount of hollows and cavities, such, for example, as embryonic tissues. It is obvious that the best substance would be one, which though solid is not friable, and which at the same time is homogeneous. These conditions are not satisfied by the ordinary imbedding mixtures, such as gelatine, wax and oil, or soapy bodies. One that has been largely used is gum solidified by the action of alcohol; and this has been recommended by Dr. Klein. In the directions appended to their "Treatise on Embryology" (of the Chick), Foster and Balfour expressly state that they do not recommend it for the study with which they are there particularly engaged, nor does the experience of other embryologists seem to do otherwise than confirm their opinion. Nor, again, do the methods ordinarily in use allow of the advantages which would be gained by the use of a transparent imbedding substance.

Already used in its *dry* state for certain observations, collodion has been found to have much to recommend it, but it is too hard for delicate bodies. When, however, a small quantity is treated with alcohol at 36° , it is found to retain its volume, while presenting a large amount of consistency, elasticity, or transparency. Having used the substance for six months, M. Duval now feels justified in recommending it to the attention of students. The embryos to be examined are first hardened by osmic acid, alcohol, or some other method, are stained with carmine, and then placed in alcohol; they are then placed for a few minutes in ether, and are then removed to the liquid collodion, in which they remain for a period varying from ten minutes to twenty-four hours. When withdrawn from this, they have attached to them a piece of elder-pith, or are, if their size and state permit of their being cut without any such aid, thrown at once into alcohol; the body now becomes surrounded with an elastic mass of collodion, which solidifies without alteration of volume, and incloses the pith if this has been already added. Thus treated, the tissue is ready for immediate section, or may be kept in alcohol for an indefinite period without danger.

As the sections are made in the ordinary way, that is, the body itself and the razor being both wetted with alcohol, it is obvious that the collodion will be prevented from becoming dry; there is no need to remove the imbedding substance, and the section may be immediately

placed on a slide; a drop of glycerine and a cover-glass are then all that is necessary for the observer to find himself delighted with an object, the optical properties of whose imbedding substance are exactly the same as those of glass. Yet another advantage remains to be noted; the collodion has not in M. Duval's sections lost its transparency after a period of six months.

A similar method may be used for foetal cerebral structures, and in the study of the eye or of the cochlea and similar delicate parts.

METHOD OF PRESERVING THE MORE DELICATE AND PERISHABLE ANIMAL TISSUES.—In a valuable article* on the development of the earth-worm *Lumbricus trapezoides* Duges, M. Kleinenberg says that whilst a great part of the earliest formations of the egg can be made out in the living state, the protoplasm being sufficiently transparent to allow the internal parts to be seen, yet afterward the precise outlines of the cells disappear, and nothing can be seen but the grosser structure. To make out the more delicate structure it is necessary to employ reagents.

Osmic acid applied in the state of vapor gives good results; but the preparations obtained by the use of a mixture of picric with sulphuric acid are more satisfactory. It has, however, the same drawback as osmic acid, of occasionally producing swellings in the primitive blastomeres, which, if it only slightly alters the normal conditions, renders the preparations less sightly. This difficulty is overcome by the addition of a little kreosote.

M. Kleinenberg, however, after many experiments, recommends strongly the following method of preservation, which he used for the particular researches treated of, and for the majority of other animal tissues, especially for the more delicate and perishable.

Prepare a saturated solution of picric acid in distilled water, and to a hundred volumes of this add two volumes of concentrated sulphuric acid; all the picric acid which is precipitated must be removed by filtration. One volume of the liquid obtained in this manner is to be diluted with three volumes of water, and, finally, as much pure kreosote must be added as will mix.

The object to be preserved should remain in this liquid for three, four, or more hours; then transferred, in order

* "Quart. Journ. Micr. Sci." XIX. 206.

to harden it and remove the acid, into 70 per cent. alcohol, where it is to remain five or six hours. From this it is to be removed into 90 per cent. alcohol, which is to be changed until the yellow tint has either disappeared or greatly diminished. Alcohol of 90 per cent. is better than absolute for preserving the more delicate structures for a long time uninjured, and for keeping the preparation at the proper degree of hardness.

For coloring crystallized hæmatoxylin is to be used, dissolved in the following mixture: Prepare a saturated solution of calcium chloride in 70 per cent. alcohol, with the addition of a little alum; after having filtered, mix a volume of this with from six to eight volumes of 70 per cent. alcohol. At the time of using the liquid pour into it as many drops of a concentrated solution of hæmatoxylin in absolute alcohol as are sufficient to give the required color to the preparation of greater or less intensity, according to desire.

This mixture, notwithstanding its chemical irrationality, gives good results. Aqueous solutions, especially when they contain traces of ammonia, are to be avoided, since they are very hurtful to many delicate tissues. The object must remain in the dye for a period varying from a few minutes to six hours, according to its size and to the nature of the tissues composing it. It is a good rule, when intending to make sections, to stain deeply and to cut them *very thin*.

When removed from the dye the preparation is to be washed in 90 per cent. alcohol, in which it may remain from six to twelve hours. Finally, to remove every trace of water, it should remain for half or a whole day in absolute alcohol.

If the preparation is to be cut it must be removed from absolute alcohol to essential oil of bergamot, in which it should remain for some hours, in order to fit it for being imbedded in paraffin, which is removed from the sections when cut by means of a mixture of four parts of essence of turpentine with one part of kreosote. Finally, the sections are mounted in resin dissolved in essence of turpentine.

Histologists are warned not to use a solution of resin in alcohol. The preparations mounted in this are at first beautiful but soon become spoiled, in consequence of the precipitation of crystals or of an amorphous substance.

He lost in this manner many hundreds of preparations, and the same results have occurred in the Zoological Station at Naples.

DR. SEILER'S SLIDES.—We have had occasion to examine Dr. Seiler's microscopical preparations, and found them to be of the very best order. Several points in them deserve to be especially mentioned, as for instance the beautiful effect which is produced by double staining, by which process the different elements of the tissues are differentiated with remarkable clearness. The general outward appearance of the Slides as well as in the cases in which they are kept are very pleasing, and the selections of typical specimens in the departments of normal histology, of pathology and of neoplasms is an excellent one, calculated to aid the beginner very materially in his study of these subjects. The Tumor Series which has been only quite recently been put off by Dr. Seiler comprises a large number of sections of cancer as well as rare neoplasms, among which a most beautiful example of true adenoma of the heart is exceedingly interesting on account of its rarity.

GLEANINGS.

TROMMER'S EXTRACT OF MALT.—"The malt extract prepared from Trommer's receipt is designed to fulfill much the same purpose as cod-liver oil, carbo-hydrates (malt-sugar, dextrin), taking the place of fatty matter. The simple (much or little hopped) and the chalybeate form of malt extract are coming more and more into favor as substitutes for the oil; they are more palatable and more easily digested, and should, therefore, be preferred in the dyspeptic forms of anæmia. During the last few years malt extract has almost entirely taken the place of cod-liver oil in the treatment of phthisis, and other wasting diseases at the Basle hospital, and we have as yet found no reason for returning to the use of the latter remedy. The extract may be given from one to three times a day in doses varying from a teaspoonful to a tablespoonful in milk, broth, beer, or wine."—*Ziemssen's Encyclopædia of the Practice of Medicine*, Vol. XVI. page 474. .

LACTOPEPTINE.—This preparation, which is a composition of Pepsin, Pancreatine, Diastase, or Vegetable Ptyalin Lactic and Hydrochloric Acid and Sugar of Milk, is acquiring a great reputation, both in England and America, in the treatment of many forms of dyspepsia and wasting diseases of children. We have used it in several cases with remarkably beneficial results, and we feel certain the profession will not be disappointed in its effects. It is also an excellent remedy in gastritis, vomiting in pregnancy, dysentery and diarrhœa of children. Pepsin is undoubtedly a valuable remedy in many forms of dyspepsia, but it does not seem to meet all the indications fulfilled by lactopeptine.—*Canada Lancet*, April, 1878.

AGUSTIA, ETC.—From Baltimore Academy of Medicine report in the Maryland *Medical Journal* for March:

Dr. McSherry referred to the case of a lady who took cold two years ago from sleeping in damp sheets, and has been devoid of the sense of smell ever since. The sense of taste is also impaired to so great a degree that she can not distinguish between different sorts of meats and vegetables. Pepper is recognized by its pungency; and so heat and cold produce the ordinary sensations upon the lingual nerves of common sensation. Electricity and various other remedies have been used without effect. The hearing is acute.

Dr. McKew cited the case of a lady who lost the sense of taste many years ago from catarrhal trouble. She is unable to distinguish the different kinds of food and drink. Her mother met with the same loss after typhoid fever and never recovered from it. In another case the sense of smell was lost after illness, that of taste being retained.

Dr. Chisolm had met with a gentleman who could appreciate no odor, but suffered by a subjective sense of an odor resembling that of rotten eggs. Yet there was nothing unpleasant to be detected by others. No treatment was of any avail.

An instance was also cited in which a person could distinguish no color but yellow; another in which only black could be made out.

POTASSIUM BROMIDE IN CHRONIC CHILLS.—A correspondent of the Southern *Medical Record* writes as follows:

Mrs. P., aged 65, has had third-day chills for three years. The morning after the chill I commenced giving bromide,

fifteen grains, three times a day. She has had no more chills for the last three years.

A child of Mrs. N., five years old, has had third-day chills for three years. I gave bromide, in five-grain doses, three times a day. It has had no more chills.

The bromide is kept up for several months, three times a day for eight to ten days, with an equally long intermission.

I have been using the bromide as above for the last six or seven years with uniform success as a preventive.

Another of my patients had chills every summer for several years. I gave the bromide, commencing in the spring. Gave it all summer and fall at intervals, as stated above. He has had no chills since, it being now five or six years. I have seen no unpleasant effects from the use of bromide of potassium.—*Louisville Medical News*.

EXTRACT OF MALT.—According to Prof. Douglass, 1,000 parts of the Trommer Extract of Malt contains malt sugar, 46.1; dextrine, hop bitter, extractive matter, 23.6; diastase, 2.469; ash-phosphates, 1.712; alkalies, .377; water, 25.7. In comparing the above analysis with that of the Extract of Malt of the German pharmacopœia, as given by Hager, he finds it to substantially agree with that article.

In the employment of these malt preparations, I have found much benefit in cases where the system had become depraved, either from lack of assimilative power or the drain occasioned by chronic suppurative action, as phthisis, etc. Frequently in cases of chronic dyspepsia, where scarcely any food could be retained upon the stomach, I have been enabled to supply the demands of nutrition by the extract of malt alone, or combined with milk diet. In phthisis I have experienced good results from its administration, combined with cod-liver oil, and find that much of the unpleasant taste of the oil is disguised by combining the two, so that where the oil itself will not be regularly taken by the patient, from disgust, I have had very little trouble in prevailing upon him to continue the use of the malt and oil combined.—*Dr. Chapman, Toledo, O.*

TREATMENT OF HYSTERICAL REFLEX-NEUROSES.—Professor Weber recommends the protracted employment of chloroform inhalations in the treatment of obstinate and severe cases of hysterical reflex-neuroses, of the respira-

tory apparatus, when the primary seat of irritation can not be discovered and treated. He has himself proved the value of the inhalation in several cases. His first case was a lady with a spasmodic cough, that had proved rebellious to all treatment; she was cured in eight days by the chloroform inhalations, which were administered as often as the cough came on. A child with sneezing spasms was cured in three days by the chloroform. Another lady with a spasmodic cough was treated with the same remedy for fourteen days, the inhalations being administered at first four or five times, and afterward two or three times daily. She was much improved; the cough only came on after a walk, and the inhalations were only required then. In four weeks she was discharged cured; a subsequent slight relapse was cut short by the internal administration of chloroform. In the case of a girl fourteen years of age, who suffered from spasms of sneezing, the inhalations produced a speedy cure.

VINEGAR AS A POST-PARTUM HEMOSTATIC.—At a meeting of the American Gynecological Society, Dr. Penrose—in a paper on vinegar as a remedy in the treatment of post-partum hemorrhage—presented the following advantages:

1. It could be easily obtained.
2. It could be easily applied and instantly, without special apparatus.
3. It always cured the hemorrhage; or rather it had not failed in his practice.
4. It was sufficiently irritating to excite the most sluggish uterus to contraction, and yet not so irritating as to be subsequently injurious.
5. It was an admirable antiseptic.
6. It acted upon the lining membrane of the uterus as an astringent.

The remedy was applied as follows: Saturate a rag with vinegar; carry it into the cavity of the uterus, and squeeze it.

In the vast majority of cases, the hemorrhage ceased as if by magic when the vinegar passed over the surface of the uterus and the vagina. It could be easily repeated, in case the first application failed.

TREATMENT OF EPILEPSY.—In the treatment of this disease, Dr. O. Berger found cold applications (Chapman's method) of benefit only in the hysterio-epileptic forms.

Both this treatment and electricity failed in true epilepsy, though the constant current relieved the vasomotor form. The author got no results from the monobromide of camphor or the bromide of zinc, nor from atropine nor curare. The nitrite of amyl is a good remedy for the attack. The bromide of potassium is the sheet anchor in doses of 6–12 grammes per day. The disease was thus arrested for two years at most but was in no case cured. Bromalhydrat had the same effect as bromide of potassium.—*Deutsche Zeitschrift*.

OPIUM HABIT AND AMYL NITRITE.—Dr. Deyman (*Medical and Surgical Journal*) has successfully used amyl nitrite in insomnia consequent upon suddenly discontinuing the opium habit. Two or three whiffs—the flushing of the face being the criterion—were usually sufficient, being followed by refreshing sleep.

ADVANTAGES OF A SINGLE PUNCTURE OF EACH ARM IN THE VACCINATION OF VERY SMALL CHILDREN.—Dr. Hughes (*Gazette Obstetricale from Nice Medicale*, September 5, 1878, page 259) establishes the two following conclusions:

1st. Contrary to the general opinion, it must not be believed that variola being rare in the first two or three months of life, it is not necessary to vaccinate at this age. He has observed several cases of small-pox in children less than three months old, which he had refused to vaccinate. He therefore vaccinates any child now at the slightest wish of the parents. But having formerly made three punctures in each arm, and seen several accidents due to extent or intensity of inflammation, he was led to inquire if a single puncture would not be sufficient.

2d. It is entirely sufficient to make but a single puncture in each arm in very young children. In eleven children re-vaccinated at later periods, and even with three punctures, not one was susceptible to the influence of the virus.

INFANTILE PARALYSIS.—Dr. Bouchut is convinced that electrization of the paralyzed muscles should be commenced as soon as possible after the onset of essential paralysis of childhood. The general opinion has been that electricity should not be used in these cases until some time has elapsed from the supervention of the paralysis. Dr. Bouchut thinks this is the cause of treatment

being fruitless in many instances. In one case in particular, he used electrization forty-eight hours after the appearance of paralysis and the cure was complete. He has since seen the same treatment carried out by his advice in several cases with the same good results. Continuous currents were always employed, "they constitute the true electricity of nutrition." Adjuvant means were used, such as massage, stimulating frictions and exciting douches.

HOW TO KILL A TAPEWORM IN AN HOUR.—Kousso and kamela are expensive drugs, nauseous to the taste, not always effectual, and require several days to effect the death of the worm. Dr. Karl Bettelhiem, of Vienna, narrates in the *Deutsches Archiv*, a heroic method and nearly sure cure in the short space of time of three-quarters of an hour or two hours. It is this: He inserts a tube in the œsophagus, to the stomach, and pours down from two hundred to four hundred granimes of a very concentrated decoction of pomegranate root, having previously had his patient fast for twenty-four hours. The worm is stupefied and passed, head and all, to a certainty; the patient has no sickness of the stomach and no nauseous swallowing to do; and the drug is cheap.

ON THE EMPLOYMENT OF LISTER'S METHOD IN THE TREATMENT OF BURNS.—The burned part is to be carefully disinfected, and then covered with a piece of linen spread with Lister's boracic acid. Then follows the envelopment with carbolyzed gauze or salicylic cotton. According to H. Busch, of Bonn, under this dressing the necrosed parts are separated, move gradually and easily, and the granulations never become exuberant. The most striking results, however, are seen in the cicatrix. Instead of the usual extensive cicatricial bridles which project above the surface and exert traction on the neighboring tissues, an almost smooth cicatrix forms, which remains elastic and extensive, and does not cause contracture.

TREATMENT OF OBESITY BY ARSENIC.—Dr. J. T. Whittaker states that he has employed arsenic with success in the treatment of four cases of obesity. One case was so severe that the patient fainted on the slightest movement; he had gained forty pounds in three months. He had no valvular lesions and had never had rheumatism. After the failure of all other methods of treatment, he was put

on five drops of Fowler's solution three times a day. In two months he was restored to health, could walk well, and had lost much of his *embonpoint*. In the three other cases, two of which were complicated with asthma, the effect was also decisive but less rapid.—*Cincinnati Lancet*.

ARSENIC IN PAPER CIGAR-HOLDERS.—Professor Jaderholm, of Berlin, has discovered arsenic in dangerous quantities in the pasteboard cigar-holders that are much used at present in Germany. The poison was found in the form of Schweinfurt green, not only in most of the holders which were colored green on the outside, but also in the inner layer of paper in holders which were externally of different colors. The professor earnestly warns smokers against the use of these holders, as the poison they contain is brought into the closest connection with the buccal mucous membrane and the saliva, and thus finds its way into the blood, both from the mouth and the stomach.—*Allg. Med. Cent. Zeit.*

A CHEAP DISINFECTANT AND DEODORIZER.—Dissolve a drachm of lead nitrate in a pailful, and a drachm of common salt in a jugful of soft water, and mix the two solutions. Soft water is essential, on account of preventing the formation of an insoluble carbonate of lime and lead. Dip rags into the solution, and hang them up in the offensive room, or pour some of the mixture upon excrements, or down the privies or sinks. This is of ordinary strength, but the solution may be made stronger if desired. If carb. lead and lime form, pour off the clear liquid and use none of the sediment.

BROMIDE OF POTASSIUM AS A DIURETIC.—In the case of a gendarmes suffering from albuminuria and uræmic convulsions, Dr. Sohler administered bromide of potassium in doses of 30 to 45 grains. Free diuresis was produced, between two and three quarts of urine being passed in one night, and the albumen, which was previously present in large quantities, disappeared entirely. In three other cases the bromide produced similar diuretic effects. Its diuretic action is exerted on healthy persons also.—*Centralblatt f. Chir.*

ELECTRICITY IN NEURALGIA.—As a guide to the proper current indicated in the various forms of neuralgia, Dr.

Rockwell says: "I find the effects of pressure are exceedingly useful. I would not lay it down as a law, but it will be found, in the great majority of cases of neuralgia, where firm pressure over the affected nerves aggravates the pain, the galvanic current is indicated, while the Faradic current has the greater power to relieve when such pressure does not cause an increase of pain."—*Med. and Surg. Brief.*

TREATMENT OF SEVERE BED-SORES.—Dr. Dyce Duckworth (*Archiv. Dermatology*) communicated to the Am. Derm. Ass. meeting of 1877, a short paper on this subject. He recommends that, in addition to the use of the water-bed, the patient should lie with the buttocks and sacrum constantly upon poultices. These should be made of linseed, and if there be much discharge or fœtor, the cataplasma carbonis should be used. They should be made of pure linseed, and frequently changed. They must be large and secured in position by a binding sheet secured over the abdomen by safety-pins. The balsam of Peru should be added if there is deep excavation and sloughing.—*Am. Med. Bi-Weekly.*

ANTIDOTE FOR CARBOLIC ACID POISONING.—Professor Bauman has recommended, and Dr. Senftleben has used, dilute sulphuric acid as antidote to carbolic acid, and with success; the phenol and the acid combining to form phenylsulphuric acid, which is not poisonous. His formula was:

Acid. sulph. dil.,	10
Mucilag. acaciæ.,	200
Syrup. simp.,	20

Dose: A tablespoonful evry hour.—*The Pharmacist.*

TO FACILITATE THE INTRODUCTION OF INSTRUMENTS INTO THE BLADDER.—Depres recommends that after the patient's urethra be completely filled with oil by means of a syringe, he be ordered to micturate. The consequent relaxation of the sphincter vesicæ allows the escape of oil from the urethra into the bladder. By this procedure large sounds, lithotrites and other instruments which can not be passed by the old method of oiling them are quite easily introduced.—*St. Petersburg Med. Wochenschrift.*

VAGINISMUS AND IRRITABLE URETHRA.—Dr. Bedford Brown mentions cases of vaginismus occurriug in his practice,

which he has relived in a short time by the application of pure concentrated carbolic acid over the entire surface of the ostium, the vagina, and the os uteri, in this way obtaining the permanent sedative action of this agent on these surfaces, thereby effectually destroying this state of hyperesthesia in a number of cases of vaginismus and irritable urethra.—*Med. and Surg. Brief.*

CORRESPONDENCE.

To the Hon. the Board of Trustees of the Cincinnati College of Medicine and Surgery :

GENTLEMEN—In a letter under date of June 7, 1878, I exposed to your Honorable Board the very imperfect qualifications of certain members of your Faculty. Your failure to make any effort to disprove all or any of the statements therein contained, must be taken as evidence that you regard them true; and by continuing these persons in your Faculty you tacitly admit that ignorance, deception and indecency before a medical class do not detract from the medical teacher, and that Professors Bramble and Miles are competent to teach in the departments, respectively, of surgery and diseases of women and children, such students as may assemble in the halls of the Cincinnati College of Medicine and Surgery.

I may not question your right to do as you have done, but you will pardon me for intimating that the position you have taken in this matter is not invulnerable. You may trifle with the dearest interests of society, and you may degrade the medical profession by keeping in place incompetent personal friends, but when the facts shall become known the former will arraign you at the bar of public opinion, and the latter will rebuke you by withholding patronage from your enterprise. Yours will be the glory of destroying your college in preference to parting with your personal friends who fail to command the respect of the profession.

In my former communication, I told you that Professor Bramble was without correct moral training. I now and here make the charge against him that he is unfaithful to the medical profession, and his course in the college has been marked by a want of that dignity and honor pecu-

liar to "the pure in heart." His consultations with irregular practitioners, and his *smuggling* through the college an individual who but a few days before his graduation received a diploma from an irregular school, must be regarded as evidences of a weak sense of moral obligation, so weak as to make him unfit to belong to, much less dictate the policy of a medical school.

If you doubt the correctness of these statements, I am ready to prove them by documents in my possession, and by reference to physicians of high standing.

I have the honor to remain,

Very respectfully,

CHAS. A. LEE REED, M. D.,

Late Prof. of Pathology in Cin. Col. of Med. and Sur'y.

FIDELITY, ILL., *May* 23, 1879.

OBITUARY.

Willis E. Sutton, M. D.

AT the residence of his father, Dr. George Sutton, of Aurora, which had always been his home, Willis E. Sutton, M. D., passed from life into eternity, at 3 o'clock, on Monday morning, February 24, 1879, very unexpectedly, too, to his almost innumerable friends, who, although they knew that disease had attacked him some two years since, yet having seen his ever pleasant face only a few days ago, hardly could believe that so soon the icy hand of death had come to lead him away for ever. But he has gone, and he has left behind him a greater host of friends than scarcely another at his age could claim; for such was the kindliness, the evenness, straightforwardness and steadfastness of his character, that whoever knew him loved him, and no one ever spoke ill of him.

Dr. Willis E. Sutton was born in Aurora, Indiana, June 2, 1848, and died at the residence of his father in Aurora, February 24, 1879. During the first year of his life he was a strong and healthy child, but in the spring of 1849, cholera, which was prevailing as an epidemic at different places along the valleys of the Ohio and Mississippi Rivers, made its appearance on the 19th of May in Aurora. The disease soon assumed its most malignant form, confined, however, to a small portion of the town.

On the 12th of June, a brother of Willis, in the fifth year of his age, was suddenly attacked with the epidemic and died after only a few hours' illness. On the 20th, Willis was attacked. He sank into collapse, his skin became purple, he was cold and shivelled, and he was almost pulseless; contrary, however, to the most distant expectations, he gradually, to a certain extent, recovered.

His system was so enfeebled from this attack that he was not sent to school until he was nearly seven years of age. As he grew older he apparently became vigorous. He received a good education, commencing his schooling with the Aurora graded schools, then the Moore's Hill College, and afterward he was sent to Wabash College, at Crawfordsville. In 1869 he commenced the study of medicine under the tuition of his father. He attended medical lectures at Cincinnati and graduated at the Medical College of Ohio in 1872. The following winter he attended lectures at Jefferson Medical College; he also attended the hospitals at Philadelphia. On his return he commenced the practice of his profession, and soon became popular and successful as a physician. He was an enthusiastic lover of his profession, and conscientious in the discharge of its duties, attending the sick with that spirit of kindness and interest so manifest in his character. He was a good microscopist, and, under the direction of his father, was the first to detect trichinæ in the pork raised in Southeastern Indiana. He rendered valuable assistance in investigating the cases of trichinosis that occurred in Aurora in 1874. He was a member of several medical societies: The Dearborn County Medical Society, the Indiana State Medical Society, and the American Medical Association. In the spring of 1877 he made a trip to Memphis for the benefit of his health. While at Evansville, on his way home, he was caught in a storm of rain and got wet. That night while on the boat he was seized with a chill, followed by an attack of pneumonia. Not being able to treat his case properly while on the boat, the disease assumed alarming symptoms by the time he reached Aurora—his left lung becoming consolidated. During the summer he went to Minnesota, where he remained some time. His health was to some extent improved. In the fall of 1877 he went to Florida, reaching Jacksonville just at the time yellow fever had made its appearance and was creating a

panic among the inhabitants of that city. He wrote a letter on the subject, which was published in the *Independent*.

He remained in Florida until spring, when he returned, his health being but little improved. During the early part of this winter he visited Texas, and, after remaining at Austin about a month, he found the climate did not agree with him, and returned to his home.

The Dearborn County Medical Society and others of which he was a member, passed resolutions expressing great sorrow in consequence of his demise.

BOOK NOTICES.

DISEASES OF THE THROAT AND NASAL PASSAGES. A Guide to the Diagnosis and Treatment of Affections of the Pharynx, Œsophagus, Trachea, Larynx, and Nares. By J. Solis Cohen, M. D., Lecturer on Laryngoscopy and Diseases of the Throat and Chest in Jefferson Medical College, etc., etc. Second Edition. Revised and Amended. With 208 Illustrations. Svo. Pp. 742. New York: Wm. Wood & Co. Cincinnati: R. Clarke & Co. Price, \$5.50.

This work, a very thorough and complete one on the subjects of which it treats, is a work much needed. Diseases of the throat and nasal passages, of the pharynx, œsophagus, trachea, larynx, and nares are diseases which, from various causes, are very prevalent in this country, and physicians, therefore, are very frequently called upon to treat them. In consequence of their frequency, and the incompetency of not a few regular physicians to treat them, very many of the cases fall into the hands of advertising quacks and irregulars, who profess to make the treatment of them a specialty. Scarcely a newspaper can be taken in hand in which there is not the displayed advertisement of some Dr. Hunter, or Jones, or Aborn, or Smith, professing to be just from the hospitals of London, France, and Berlin, setting forth the great success that follows upon his treatment of these affections—curing cases after all the noted “allopathic” physicians of the principal cities had failed. The cause of the failure, oftentimes, by regular physicians in the treatment of diseases of the upper air passages, is due to the fact that

these maladies require given them some special attention for their proper management. This the ordinary physician has seldom done. His attention is mostly taken up with those diseases that make up a large part of his practice, as typhoid fever, acute rheumatism, obstetrics, etc., and he knows scarcely anything about the peculiar features of affections of the throat, larynx, nasal passages, etc. When, therefore, a case comes to him for treatment, he prescribes a gargle or wash, or touches the inflamed part with nitrate of silver, and if a cure does not follow, he can do no more, for his means have become exhausted.

The work of Dr. Cohen is one that will afford the general practitioner a very satisfactory knowledge of all that is peculiar in the pathology and therapeutics of the affections of the upper air passages. The information is the very latest, and is abreast of the most recent progress. The physician who adds it to his library, and will take the time to give it attentive perusal, will become far better qualified to treat a certain class of diseases than he is now. He will not only "put money in his purse"—many hundred dollars very probably—which otherwise he would not have been able to do, but he will obtain for himself "honor and glory," and add credit to his profession. We consider that when a regular physician, by undoubted knowledge and skill, has cured a case which, on his failing to do, would have fallen into the hands of a boasting charlatan, he has rendered a service and done an honor to his profession.

We hope the second edition of this work will meet with the same appreciation as did the first.

A GUIDE TO THE QUALITATIVE AND QUANTITATIVE ANALYSIS OF THE URINE DESIGNED FOR PHYSICIANS, CHEMISTS, AND PHARMACISTS. BY DR. C. NEUBAUER, PROFESSOR AT WIESBADEN, AND DR. J. VOGEL, PROFESSOR IN THE UNIVERSITY AT HALLE. With a Preface by Professor Dr. R. Fresenius. Translated from the seventh enlarged and revised German Edition, by Elbridge G. Cutler, M. D., Pathologist at the Boston City Hospital, etc. Revised by Edward S. Wood, M. D., Professor of Chemistry in the Medical School of Harvard University. 8vo. Pp. 551. New York: William Wood & Co. Cincinnati: R. Clarke & Co. Price, \$6.00.

This work beyond doubt is the most complete and reliable work upon analysis of the urine extant. It is the leading work in Germany, where it has passed through seven editions, upon the subject of which it treats, and now, translated into English, it will take the same position in this country and Great Britain. By its analysis of urine, and the physiological and pathological indications demonstrated thereby, are almost made into a separate science, instead of only forming a department of medical chemistry. The general practitioner of medicine, on examining this work, will find that, while his ordinary knowledge of chemistry and urinary pathology are good so far as they extend, yet that they admit him but on the threshold of uroscopy. He will be surprised at the extent to which the subject has been cultivated and made available in the study and treatment of disease. None but those capable of the closest study, possessing the critical mind, and having the analytical powers characteristic of the German, could produce such a work.

The scope of this work is far more than the teaching of the methods required to obtain a knowledge of the chemical composition of the urine. It explains the inferences to be drawn in regard to the condition of the patient from the character of the urine; what are the changes going on in the body of the patient; whether there is wasting of the tissues; whether digestion and assimilation, either or both, are being imperfectly performed or not, etc., etc.

The work is divided into two parts. The first by Dr. Neubauer is strictly chemical; the second by Dr. Vogel is chiefly medical.

Dr. Neubauer divides his part into three divisions, and summarizes their contents as follows:

I. DIVISION—

1. Physical and chemical properties of normal urine.
2. Normal constituents.
 - a. Organic.
 - b. Inorganic.
3. Abnormal constituents.
4. Sediments.
5. Accidental constituents.

II. DIVISION—

Quantitative estimation of the various organic and inorganic constituents.

III. DIVISION—

1. Practical guide to qualitative analysis.
2. Recognition of sediments under the microscope.

3. Practical guide to quantitative analysis.
4. Practical guide to the approximate quantitative estimation.
Analytical notes.

The following is a summary of the entire contents :

I. DIVISION—

1. Physical and chemical properties of normal urine.
2. Normal constituents.
 - a. Organic.
 - b. Inorganic.
3. Abnormal constituents.
4. Sediments.
5. Accidental constituents.

II. DIVISION—

Quantitative estimation of the various organic and inorganic constituents.

Dr. Julius Vogel, the author of the second part, which treats of the semiology of urine, or the estimation and significance of the changes of this fluid, makes two principal divisions and several subdivisions as follows :

I. DIVISION—

Qualitative changes of the urine, including the sediment.

- a. Changes in color, appearance, and odor of urine.
- b. The chemical reaction of the urine and its significance.
- c. The occurrence of unusual or abnormal constituents in the urine.
- d. Urinary sediments.

II. DIVISION—

Quantitative changes of the urine; the increase and diminution of the normal constituents.

- a. Quantitative changes of the urine which can be determined without chemical analysis, and which, on account of their easy detection, are especially important to the physician.
- b. Quantitative changes which require a quantitative chemical analysis for their demonstration.

Every scientific physician who wishes to study all cases of disease scientifically that falls under his care will procure this work. One who observes all phenomena closely, scrutinizes the relations of morbid processes with each other, and is able to rapidly dispose of obscurities by the clear indications which he is always able to discover, would not do without it.

The Messrs. Wood & Co. have gotten the work up in good style. It is printed on beautiful double-sized and callendered paper, in excellent type. There are numerous fine wood-cuts, and some four or five well-executed plates.

ELEMENTS OF MODERN CHEMISTRY. By Adolphe Wurtz, Honorary Dean and Professor of Chemistry of the Faculty

of Medicine of Paris, etc. Translated and Edited, with the approbation of the Author, from the Fourth French Edition. By Wm. H. Greene, M. D., formerly Demonstrator of Chemistry in Jefferson Medical College, etc. With 132 Illustrations. 12mo. Pp. 687. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co. 1879. Price, \$2.50.

The author in the preface to the American edition, after commending the accuracy of the translation of his work into English, says: "It has been the endeavor to keep it up with the current of the latest discoveries, and in it to condense a considerable number of exact and well-selected facts, without banishing the theory which binds them together. Thus the origin and foundation of the atomic theory have been given, as far as possible, in historical order. The nations concerning atomicity, so important for the appreciation of the structure of combinations and for the interpretation of chemical reactions, are presented in an elementary form."

It will be observed that the history of the metalloids is relatively more developed than the remainder of the book. As stated, this is indeed the fundamental part of chemistry, and a familiar knowledge of it is indispensable to the fruitful study of the metals and of organic chemistry. It is also the most attractive portion for beginners, for it is the most easily understood.

Mr. Wurtz has justly won the reputation of being the most able thinker and perspicuous teacher of France. He is the acknowledged leader of modern chemical philosophy, and his labors have firmly established many of the views which long remained unaccepted by the majority of chemists, but which are now regarded as essential to the science.

Such a work as this can not help but become popular in the medical and scientific schools of this country. The lovers of the study of chemistry will be delighted with it. While it elucidates every subject so plainly that the intelligent student can master its teachings without assistance, yet it is by no means a superficial work, but will lead the student to a profound knowledge of chemistry.

¶¶The publishers have gotten out the work in handsome style. The paper is of the best quality, the type is clear

and beautiful, and the wood-cuts are excellent. They are not such as have been used to illustrate a half dozen other works.

EDITORIAL.

DELAY.—The June issue of the NEWS has been considerably delayed in consequence of the editor having been compelled to be absent from home for some three weeks. For a number of months the journal has been gotten out somewhat late for a number of causes—principal among them was a family bereavement. It is the intention, hereafter, to hurry and catch up, so as to issue the NEWS promptly on the first of the month of its date.

PAY UP.—We desire to say to subscribers who have not yet paid their subscriptions, that they should endeavor to do so without further waiting. A medical journal can not be issued without cost, and we have the printer to pay whether we are paid or not. It seems strange to us that there should be physicians who make loud complaint of patrons not paying them for their services—who will moralize by the hour of the dishonesty and ingratitude of not compensating them, and yet they themselves will neglect to pay for their medical journal.

HONORS.—At the last meeting of the American Laryngological Association, B. Tauber, M. D., was elected a Fellow of the Association.

At a recent commencement of St. Mary's College, Maryland, Roberts Bartholow, M. D., had conferred upon him the Degree of LL. D.

We congratulate these two gentlemen for the honors thus bestowed upon them. However, they have only received a deserved acknowledgment of their well-known merits.

THE AMERICAN ACADEMY OF MEDICINE.—This association of physicians was organized September, 1876, at Philadelphia, during the sessions of the International Medical Congress, when Traill Green, M. D., LL. D., of Easton, Pa., was elected its first President. Subsequently, meetings

were held in New York (1877), and in Easton, Pa. (1878), at which Frank H. Hamilton, M. D., LL. D., of New York, and Lewis H. Steiner, A. M., M. D., of Frederick, Md., were respectively chosen as Presidents. At these meetings the organization was more thoroughly perfected, and numerous accessions were made to the membership.

The Fellows of the Academy must be Alumni of respectable collegiate institutions, who have received therefrom:

1. The degree of Bachelor of Arts, after a systematic course of study, preparatory and collegiate.

2. The degree of Master of Arts in accordance with the usage of these institutions.

3. The degree of Doctor of Medicine, after a regular course of study, not less than three years, under the direction and instruction of preceptors and professors. They must have also had an experience of three years in the practice of medicine.

Candidates for fellowship must be recommended by at least one Fellow, and be approved by a majority of the Council, after which the consent, by ballot, of two-thirds of the Fellows present will secure their election.

The initiation fee is \$5.00, to be paid before initiation and registration.

Blank forms of application for fellowship can be obtained from the Secretary.

The annual meeting for 1879 will be held September 16, in New York.

RICHARD J. DUNGLISON, M. D., *Secretary*,
P. O. Box 2,386, Philadelphia.

THE following extract of an Act of Congress approved June 2, 1879, entitled "An Act to prevent the introduction of contagious or infectious diseases into the United States," is hereby published for the information of all concerned:

* * * * *
"SEC. 9. So much of the Act entitled 'An Act to prevent the introduction of contagious or infectious diseases into the United States,' approved April 29, 1878, as requires consular officers or other representatives of the United States at foreign ports to report the sanitary condition of and the departure of vessels from such ports to the Supervising Surgeon-General of the Marine-Hospital Service; and so much of said Act as requires the Surgeon-General

of the Marine-Hospital Service to frame rules and regulations, and to execute said Act, and to give notice to Federal and State officers of the approach of infected vessels, and furnish said officers with weekly abstracts of consular sanitary reports, and all other acts and parts of acts inconsistent with the provisions of this Act, be, and the same are hereby, repealed."

BY DIRECTION OF THE SECRETARY OF THE TREASURY:

J. B. HAMILTON, *Surgeon-General*.

United States Marine-Hospital Service.

A NEW ELECTRIC APPARATUS.—We have seen the reports of electrical experts, and had the opportunity of examining for ourselves the Volta Electric Belt, manufactured by the Volta Belt Company, of Chicago. This belt is virtually a galvanic battery, yielding a steady current of electricity of known power, which can be regulated at will, and either diffused through the body generally, or concentrated at one or two points, by means of the conductors and electrodes attached to the belt. No neater, more portable, or more reliable apparatus can be devised for communicating continuous electric currents to the human body; and it will be found unrivaled as a means of applying constant electric action in that large class of nervous and functional disorders in which the tonic and electrolytic action of electricity is indicated, for the purpose of assisting the nutritive processes of assimilation and disassimilation of digestion, absorption and secretion.

COLLEGE ANNOUNCEMENT.—We have received the Announcement of the *Cincinnati College of Medicine and Surgery*, for the year 1879-80. We find it stated that Professor Walton's, of the Chair of Practice, "*literary attainments* have been recognized abroad by his election as *Associate Member of the Societe Francaise D'Hygiene*," which society is probably not inferior in standing to any similar society in this country. But nothing is said in regard to the *literary production* by the occupant of the Chair of Surgery on Chloral, read before the Ohio State Medical Society. Nor is there any pointing with pride to the expert testimony by the same individual in a murder trial in which insanity was set up in defense of the criminal. Such invidious distinctions by those who got out the Announcement should be rebuked by the Board

of Trustees. The chloral paper and the expert testimony, as published, speak for themselves, and exhibit the author's remarkable literary and scientific attainments, and surely should have been alluded to in the Announcement.

In the requirements it is said that "certificates of preceptorship from Eclectic, Homeopathic or other so-called 'irregular' practitioners, will not be received." But Prof. C. L. A. Reed does not hesitate to charge, in a letter printed in this number of the MEDICAL NEWS, that the Dean has admitted to the class of the candidates for graduation individuals, who, but a few days before, had graduated at some of the so-called irregular schools.

Professor R. C. S. Reed is very properly complimented for his seventeen years' service in the College, but the fact is concealed that he resigned his position for the reason that he could have no confidence that the present Board of Trustees would take any steps to reform the great abuses existing in the school. There was every reason to believe that the illiteracy and incapacity that marked the occupants of some of the chairs would continue.

We have some MSS. of the *Gynæcologist*, which are pleasant to read in consequence of the *hilarious* manner in which the words are spelled, and grammar and rhetoric made use of.

MILK OF MAGNESIA.—This is the time of the year when physicians are called upon to treat summer complaints of children, infantile diarrhea, and disorders generally of the alimentary canal of the young and adults. In the treatment of these affections, especially in cases of children, antacids are much used. Prominent among them is magnesia. So much is this prescribed, that many families have come to keep it in the house, and to exhibit it themselves without the advice of their physician. But an objection to the calcined magnesia is the risk of its forming concretions in the bowels, and producing distressing symptoms. To meet these difficulties, fluid magnesias have been introduced, using carbonic acid as a solvent. But such preparations are not *fluid magnesias*, but simply solutions of super-carbonate of magnesia. Large doses of them are required even for infants, and

they often produce disagreeable distention of the stomach from the escape of carbonic acid gas.

When in New York recently, we were shown by Mr. C. H. Phillips a preparation of magnesia made by him. By a series of patient experiments most creditable to him, he has succeeded in making a pure hydrate of magnesia, a form which is the most readily soluble and most surely to act upon any acids that may be in the stomach or any portion of the *primæ viæ*. All who know anything about chemistry, know that a hydrate of an agent will enter into chemical combination when the agent itself, or any oxide or salt of it will not. Take, for instance, iron; neither it itself, nor any form of it will enter into chemical combination with arsenic, and so act as an antidote, but the hydrate. Thus, throughout the series of chemical agents, the hydrate is the form which most readily enters into combination.

Mr. Phillips calls his preparation "Milk of Magnesia," from its peculiar appearance, but it is nothing more than a pure hydrate of magnesia with pure water. From its liquid form, and being free from carbonic acid, it can be safely used when other preparations of magnesia can not be. It may be prescribed in all cases in which an antacid is indicated, being much superior as such to any other form of magnesia, or the bi-carbonate soda and potassa. Being very concentrated, the quantity required for a dose is quite small. In using it in our own case, we were pleased with its neutralizing effects without having to suffer the distension inseparable from the liberation of carbonic acid gas which follows upon taking bi-carb. soda. We believe a physician who has witnessed its beneficial results in cases in which alkali is indicated, will always give it the preference.

Although Mr. Phillips' advertisement is to be found in our advertising pages, yet we have not written what we have as a *puff*, but to make our readers acquainted with a new and really very valuable therapeutic agent. Mr. P. takes much interest in chemistry, and we believe a visit to him in his laboratory will convince any one that he is above devising any mere catch-penny preparation. Besides his preparation of magnesia, he prepares cod-liver oil in a way as to be mixible in water in all proportions, thus making it pleasant to take, agreeing with delicate

stomachs, and at the same time losing none of its properties. But we will speak of this quite valuable preparation at another time.

LETTER OF DR. C. L. A. REED.—In this issue we publish a second letter of Dr. Reed to the Trustees of the *Cincinnati College of Medicine and Surgery*. Some persons not acquainted with Dr. Reed, and with the Trustees of the College, will probably be disposed to think that the Doctor has a petty personal spite against the Trustees, and, to avenge it, is desirous of injuring the College. We can assure them that such is not the case. The Doctor is a graduate of the College, and has done a great deal of work for it. His father, who is in active sympathy with him, and who recently resigned his position in the school, held a chair in it for seventeen years, giving it the arduous labor of the best part of his life. Under such circumstances it is out of the question to suppose that he has now become an enemy of it. If we thought for a moment that he was impelled by any motive of destroying the institution, his communications would not be given space in the *MEDICAL NEWS*. We ourselves have expended too much hard work in building up the College, to wish to see it destroyed. It owes its existence to the hard toil of Professor Reed and ourselves. What is wished for by Dr. C. L. A. Reed and his friends, is that the school may not go down—that it may be rescued from those who will destroy it. No school can succeed when gross illiteracy and pretension occupy the principal chairs. In a previous number of this journal there was exposed the humiliating illiteracy and ignorance of the big overgrown boy, a short time ago a huckster in the streets of Cincinnati, who fills the chair of Surgery, not by making an unsupported assertion of it, but by having him show it up himself by publishing a portion of his paper read before the State Medical Society. Previous to extracts from it appearing in the *News*, extracts had been printed in the *Clinic*, of this city, and held up to the contemptuous gaze of the profession. Also, soon after it was read before the State Society, the *Daily Times* quoted from it to prove the want of a common-school education with very many of the members of the medical profession. Here was a physician, a member of one of the principal medical societies of the country, reading a paper before

that organization that as a literary production would disgrace a school-boy ten years old. Of course, the *Times* did not understand that the Society does not have any literary or scientific qualifications for membership, but admits all applicants by a majority vote, against whom no charges have been sustained of quackery.

It is a well-known fact that idiots and insane people not unfrequently display remarkable cunning. Though too destitute of intellect to take care of themselves, and, therefore, under the necessity of having guardians over them, yet they will be possessed of a shrewdness that will enable them to encompass their purposes, especially if those who are over them should be off their guard. In like manner notoriously ignorant and incompetent persons, unrestrained by principle, will get themselves into positions by overreaching to which they have no right, and which they are entirely unfit to fill.

It will seem improbable to many that the Board of Trustees of the College would continue in the Faculty such individuals as are described by Dr. Reed; but who are some of the Board of Trustees? One is a S. S. Davis, at one time Mayor of Cincinnati, but who, at this time, could not be elected to the office of constable—no, not to a lower office still, if there was a lower one. The people of Cincinnati got enough of him while filling the office to which he had been elected, so that when he was offered a second time as a candidate he was overwhelmingly defeated. A high degree of purity of character is not necessary to hold office in Cincinnati by any means, but those of the type of S. S. Davis can not, after they have once exhibited themselves what they are. The first meeting of the Board of Trustees he attended after his election, he stated that he had accepted the position "*to look after the interests of his friend Aub.*" This Aub is not of the Christian sect, and Mr. D., no doubt, thought that Dr. Aub could wield a large influence among his people on his behalf, but all the good that that gentleman can do for him can be placed on the point of a needle. But if he could he wouldn't, after he had used him. He is not one of those who are troubled by feelings of obligation.

Another Trustee is one G. W. Harper, Principal of a High School, who, last year, was voted out of his place by the Directors of his school, but his friends got the vote

reconsidered through their appeals. He got a watch and chain presented him through Miles. The watch itself has not yet been given, nor will not be, except under certain circumstances. He has confessed to us that the Faculty was disgraced by the gross ignorance and incompetency of a number of those who had gotten into it, and that it would never hold but an inferior position until they were eliminated. But when steps were taken to reorganize the Board of Trustees to that end, he caucused with the Rev. F. S. Hoyt to have the nominees that had been agreed upon in open Board thrown aside and others secretly substituted. And Hoyt assented to it; yes, agreed to go back on his word, on his friends, and on the interests of the school. If it be assented that such an individual is a man of piety, can it be said that he is a gentleman? Would he receive recognition among cultivated gentlemen of the world?

And what shall be said of another clerical gentleman, the Rev. C. W. Ketcham, who positively promised, as a member of a committee to investigate the qualifications of Aub for a position in the Faculty, that an opportunity should be had to appear before the Committee and demonstrate A.'s intellectual and moral disqualifications, but not only did not keep his word, but voted for his election right in the face of evidence produced before the Faculty, that Aub had made false charges against a member of the Faculty in a Faculty meeting, in which he had intruded himself. As regards the Rev. K.'s piety as with that of the Rev. Dr. Hoyt's, we have nothing to say. We know, however, how such conduct as theirs is regarded among gentlemen.

As shown by Dr. Reed, there are those among the Board of Trustees who are keeping in their place in the Faculty, men whom they know are grossly incompetent; who are objects of ridicule in the profession, and who, more than once, have been held up in medical journals and newspapers to public contempt.

We have not space nor time to say more now. We will recur to the subject at another time.

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have now an established position throughout the civilized world as important therapeutical agents. A *perfect combination* of the two has long been a desideratum, since they are both of value in the same disorders, while the cases in which one is demanded and the other contra-indicated are exceedingly rare.

The combination in PHOSPHOROLE has the twofold advantage of furnishing *the best possible form* for the administration of *phosphorus*, and *a more effective form* for the administration of *cod-liver oil*.

With regard to the former, it has been decided by the highest chemical and medical authorities that *phosphorus* should be administered *in a free state*, and in a vehicle which ensures its *perfect diffusion*, its *absolute unalterability*, and, as far as possible, its *prompt assimilation* without the gastric irritation to which the ordinary methods of exhibiting the agent give rise. It is well known that pills, emulsions, solutions in ether, chloroform, vegetable oils and resin, etc., have all failed to fulfill one or more of these conditions. Even an ordinary solution of phosphorus in cod-liver oil would not answer the purpose in all respects. We claim, however, that PHOSPHOROLE completely satisfies all the conditions. From the method of preparing it, in an atmosphere of dry carbonic acid, the phosphorus is *entirely dissolved without oxidation*, and by our mode of manipulation a *positive uniformity of strength* is ensured. It is then promptly bottled and sealed, and its *stability and permanence* thus secured. The exact amount of phosphorus in each dose is known, its efficiency is ensured, and the irritant effects upon the stomach are reduced to a minimum by the blandness of the oil. As a means then of administering *phosphorus* in the many cases in which it is indicated as a *nervous tonic and stimulant*, it is claimed that PHOSPHOROLE is the best attainable in the present state of our knowledge.

The value of *cod-liver oil* in phthisis is so familiar to the physician that it is needless to dwell upon it. But the value of *phosphorus* is also universally recognized in this disease, especially when complicated with nervous derangements. The *combination* of the two therefore furnishes a more effective form for the administration of cod-liver oil in the great majority of cases in which that remedy is indicated, and one which will at once commend itself to the profession.

A dose of two teaspoonfuls of PHOSPHOROLE contains $\frac{1}{100}$ of a grain of phosphorus. This dose, when given after a meal, is effective, and not very liable to interfere with digestion. *Phosphorus is cumulative in its action, and should be administered with watchful care.* About $\frac{1}{12}$ grain is considered the largest safe dose, and we rarely need go higher than $\frac{1}{20}$ or $\frac{1}{30}$ of a grain. At the very first appearance of the smallest gastric derangement, the exhibition of phosphorus should be stopped.

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This Elixir contains Iodine, Pyrophosphate of Iron, the active principle of anti-scorbutic and aromatic plants, and acts as a *tonic, stimulant, emmenagogue, and a powerful regenerator of the blood.* It is an invaluable remedy for all constitutional disorders due to the impurity and poverty of the blood. One of the advantages of this new preparation consists in combining the virtues of Iodine and Iron, without the inky taste of Iodide of Iron.

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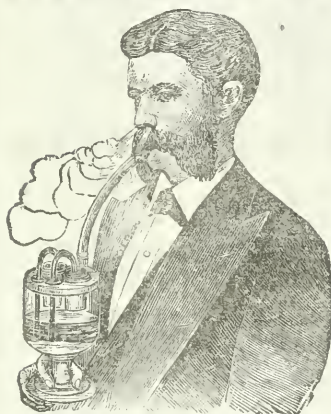
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The superiority of these Globules over other forms consists in the ease with which they are taken, and in their ready solubility and hence promptness of action.

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Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German
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restoration of delicate and exhausted constitutions. It is very nutritious, being rich
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Consisting of equal parts of Extract of
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Consisting of equal parts of Extract of
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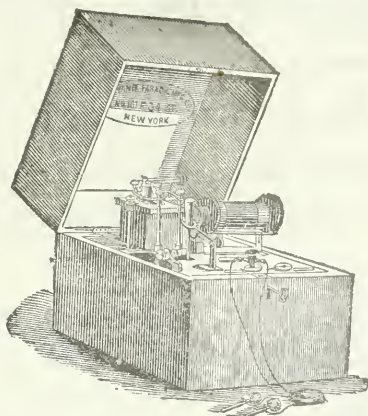
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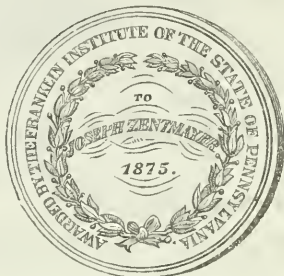
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TO THE MEDICAL PROFESSION.

MALTINE.

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THIS PREPARATION
Contains from three to five times the
Medicinal and Nutritive Elements found in
Extract of Malt.

MALTINE is a highly concentrated extract of malted Barley, Wheat and Oats, containing, undiminished and unimpaired, all the medicinal and nutritious principles found in these cereals. By the most carefully conducted scientific process, we are enabled to offer to the medical profession a perfect article, possessing from three to five times the therapeutic and nutritive merit of any foreign or domestic Extract of Malt.

In support of our claims we invite the attention of the profession to the following points, viz:

FIRST: In the manufacture of MALTINE the evaporation necessary to reduce it to its great density is conducted in vacuo, at a temperature ranging from 100° to 120° Fahr.; while most manufacturers of Extract of Malt resort to "open pan" or low pressure steam boiling, by neither of which processes can the extract be so produced as to preserve the Diastase, Phosphates, and Albuminoids on which its remedial value so greatly depends, and the product is either of a dark color or of low specific gravity, possessing little virtue aside from the saccharine matter which it contains.*

SECOND: Carbon, Hydrogen, Nitrogen, Phosphorus, Sulphur, Iron, Magnesium and Potassium are essential elements in the food of man, and it is only in MALTINE, containing the combined properties of malted Barley, Wheat, and Oats, that all these principles can be found in the proper proportions; Extract of Malt made from Barley alone is wanting in some of the most important of these elements.

THIRD: Gluten is the most nutritious principle found in the cereals, and is the only vegetable substance which will alone support life for any great length of time. It is composed of three distinct nitrogenous principles, together with fatty and inorganic matters, and is analogous to animal fibrin. MALTINE contains twenty times the quantity of Gluten found in any Extract of Malt.

FOURTH: LIEBIG says, "Wheat and Oats stand first among our list of cereals in combining all the elements in proportions necessary to support animal life. They are especially rich in muscular and fat producing elements." The only reason we use malted Barley in the manufacture of MALTINE is that it contains larger productions of mineral matters (bone producers) and Diastase. It is deficient in all other essential elements.

We believe that any practitioner will readily recognize the superiority of MALTINE, and would request a trial and comparison of merits with any article offered for similar uses.

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The Nitrogenous constituents of MALTINE have a composition identical with that of the chief constituents of the Blood, and therefore contain nearly every element requisite for the reproduction of the human body.

MALTINE AND ITS COMPOUNDS

Can undoubtedly be used with greater success than any other remedy now known, in cases of general and nervous Debility, Indigestion, imperfect Nutrition and deficient Lactation; Pulmonary affections, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membranes and difficult expectoration; Cholera Infantum and wasting diseases of children and adults; Convalescence from Fevers, and whenever it is necessary to increase the vital forces and build up the system.

We manufacture the following preparations, the formulas and doses of which are given in our dose books and on the label attached to each bottle:

MALTINE with Hops.

MALTINE, Ferrated:

This combination is specially indicated in Anæmia and Chlorosis, and in all cases of defective nutrition, where Iron is deficient in the system.

MALTINE with Phosphates Iron and Quinia:

A powerful general and nutritive tonic.

MALTINE with Phosphates Iron, Quinia and Strychnia:

A powerful nutritive, general and nervous tonic.

MALTINE with Hypophosphites:

This preparation is specially indicated in Phthisis, Rickets, and deficient Ossification.

MALTINE with Pepsin and Pancreatine:

One of the most efficient combinations in Dyspepsia, Cholera Infantum and all diseases resulting from imperfect nutrition. It contains three of the all-important digestive agents, Diastase being one of the constituents of the MALTINE. We believe there are few cases of Dyspepsia which will not readily yield to the medicinal properties of the above combination, while the system is invigorated by its nutritive qualities.

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One of the most valuable combinations in cases of general Debility, when there is deficient nutrition and a deficiency of Iron in the system.

MALTINE with Cod Liver Oil:

The most perfect emulsion, and most agreeable and effective mode of administering this nauseous but valuable Oil yet discovered.

MALTINE with Cod Liver Oil and Phosphorus:

In this combination the Phosphorus has no irritant effect upon the stomach.

MALTINE with Cod Liver Oil and Iodide of Iron:

This is prepared with the tasteless Iodide of Iron, which undergoes no chemical change from contact with the Oil, and does not blacken the teeth.

MALTINE with Alteratives:

In this preparation MALTINE is combined with the most valuable Alteratives known, such as Iodides, Bromides, and Chlorides, and will fully meet the requirements of the practitioners in Syphilis, Scrofula, and all depraved conditions of the blood. Each fluid ounce contains: Chloride Calcium, 10 grains; Chloride Magnesium, 10 grains; Bromide Sodium, 5 grains; Iodide Potassium, 1 grain; Iodide Iron, $\frac{1}{4}$ grain. Dose: One teaspoonful to one tablespoonful.

We also manufacture a perfectly prepared EXTRACT OF MALT from Barley only.

MALTINE preparations are sold at the same prices as EXTRACT OF MALT and its combinations, and are put up in amber bottles holding sixteen fluid ounces; each bottle inclosed in a folding paper box.

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PURE COD LIVER OIL

WITH
HYPOPHOSPHITES OF LIME AND SODA

PERFECT, PERMANENT, PALATABLE.

We respectfully ask the Medical Profession to give the above preparation a trial, knowing they will find it just the thing long desired, and obtain splendid results in the wasting diseases indicated by mal-nutrition and assimilation. The *perfect* and *permanent* union of the Cod Liver Oil with the Hypophosphites, and the thorough manner in which the nauseous taste is disguised, renders it so palatable that the most delicate stomach can retain it. The notable advantage it possesses over all other preparations, is its permanency as an emulsion, remaining for an almost unlimited time without the slightest separation or change, which enables the Physician always to prescribe it in its proper proportions. This oil is prepared expressly for us and guaranteed strictly pure. We will gladly furnish, express paid, a 4 oz. sample to any Physician in the country who may not have been supplied.

FORMULA.—50 per cent. of pure Cod Liver Oil, 6 grs. of the Hypophosphite of Lime, and 3 grs. of the Hypophosphite of Soda to a fluid ounce.

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Speaking of HORLICK'S FOOD: "Being carefully prepared, according to Liebig's Formula, by Chemists fully competent, it possesses certain advantages, such as quick and easy preparation and a pleasant flavor, and is therefore highly esteemed by those who have used it." [Page 58 of the fourth edition of a *Treatise on Diseases of Infancy and Childhood*. By J. Lewis Smith, M. D., etc.—1879] Also, speaking in another place [page 647] of artificial food for infants, especially those suffering from intestinal catarrh, he says: "I prefer Liebig's, especially **HORLICK'S** preparation of it."

Report from Bellevue Hospital, New York.

In *The Hospital Gazette* for February 6th. 1879 [page 108] Dr. E. Hochheimer makes a report from BELLEVUE HOSPITAL of a case of Infantile Paralysis, which was followed by an exhausting diarrhoea—Speaking of the treatment, he says. "Her condition continued unchanged for the next three weeks; she was put upon a diet consisting principally of milk, but the diarrhoea persisted in spite of opiates and astringents."

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1-6 " " " " " "		
1-8 " " " " " "		
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1-2 inch	45°	10
1-4 inch	100°	14
1-8 inch	112°	20
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The discrimination in the Centennial awards, as is well known, existed in THE WRITTEN REPORTS ON AWARDS by the judges, and not in the medals, which were all alike. Dr. Kidder, as far as he knows, is the only one who has published any authorized report upon such apparatus. The Centennial award is as follows:



International Exhibition,
PHILADELPHIA, 1876.

The United States Centennial Commission has examined the report of the Judges, and accepted the following reasons, and decreed an award in conformity therewith.

PHILADELPHIA, Feb. 24, 1877.

REPORT ON AWARDS.

"PRODUCT,

GALVANIC APPARATUS.

The undersigned, having examined the product herein described, respectfully recommend the same to the United States Centennial Commission for award for the following reasons: For the Scientific basis and the excellent workmanship of all the exhibited Apparatus; for the introduction of a new method to get very rare interruptions from a self-acting interrupter; for the fitness for the purposes of **changing the quality and quantity** of the galvanic current, and for the very good construction of Galvano-Caustic Apparatus.

Name and Address of Exhibitor,
JEROME KIDDER, M. D., New York.

Dr. ERNST FLEISCHL, *Signature of the Judge.*

Approval of the Group of Judges.

W. ROTH, M. D., Surg.-Gen., Saxony, German Army.
J. H. THOMPSON, A. M., M. D.
C. B. WHITE, M. D.

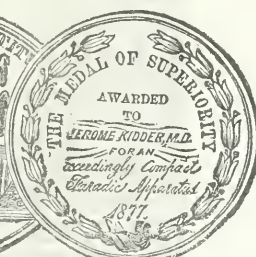
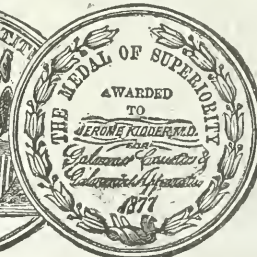
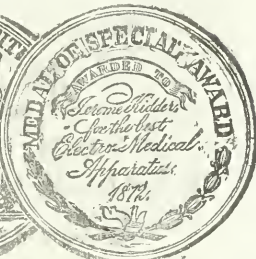
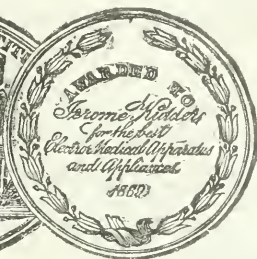
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FRANCIS A. WALKER, *Chief of the Bureau of Awards.*

Given by Authority of the United States Centennial Commission.

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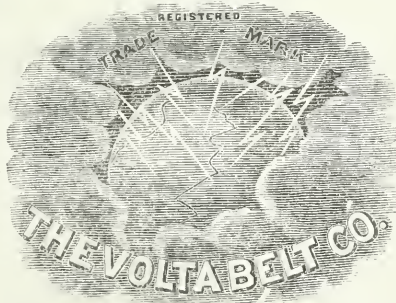
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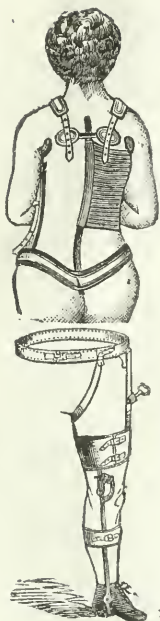
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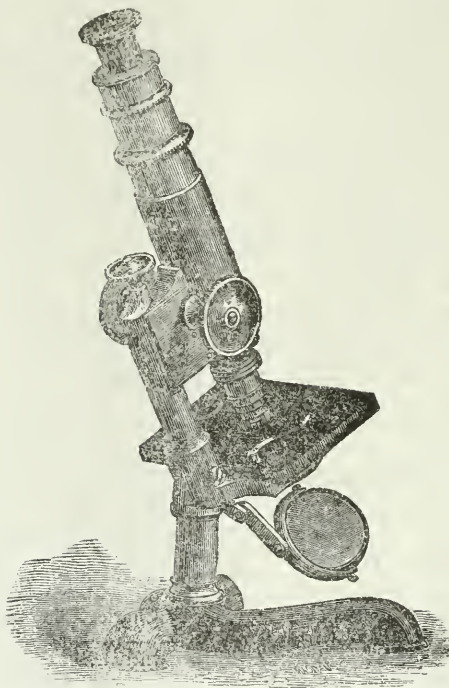
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We herewith display a cut of a blank bill for physicians' use in making out their bills for services. It is the best form we have met with. The line below, that for professional services, can be used for other charges than that for professional services, if ever there should be occasion for any thing of the kind; as in selling medicines, a horse, etc. On the lines under Memoranda any particulars can be noted that may be desired. Orders received at the office of the MEDICAL NEWS will be filled and forwarded at rates that will be satisfactory.

TO PHYSICIANS.

THE scarcity and high prices of Cinchona barks and Sulphate of Quinia, and the prospect of only a slight reduction in these prices, makes the present a favorable opportunity of calling the attention of the profession to the *combination of all the bark alkaloids*.

Much attention has been given to this subject in Europe and India.

The growing appreciation by the medical profession of the United States of

CINCHO-QUININE

is due to the fact that it retains the important alkaloids IN COMBINATION, — a combination which in practice is *preferable to perfect isolation or separation* of these alkaloids.

In addition to its superior efficacy as a tonic and anti-periodic, it has the following advantages, which greatly increase its value to physicians : —

1st, *It exerts the full therapeutic influence* of Sulphate of Quinine, in the same doses, without oppressing the stomach, creating nausea, or producing cerebral distress, as the Sulphate of Quinine frequently does; and it produces much less constitutional disturbance.

2d, It has the great advantage of being *nearly tasteless*. The bitter is very slight, and not unpleasant to the most sensitive, delicate woman or child.

3d, It is *less costly*; the price will fluctuate with the rise and fall of barks, but will always be much less than the Sulphate of Quinine.

4th, It meets indications not met by that Salt.

The following well-known Analytical Chemists say : —

"UNIVERSITY OF PENNSYLVANIA, Jan. 22, 1875.

"I have tested CINCHO-QUININE, and have found it to contain *quinine, quindine, cinchonine, cinchonidine*.

F. A. GENTH,
Professor of Chemistry and Mineralogy."

"LABORATORY OF THE UNIVERSITY OF CHICAGO,
Feb. 1, 1875.

"I hereby certify that I have made a chemical examination of the contents of a bottle of CINCHO-QUININE; and by direction I made a qualitative ex-

amination for *quinine, quindine, and cinchonine*, and hereby certify that I found these alkaloids in CINCHO-QUININE.

C. GILBERT WHEELER,
Professor of Chemistry."

"I have made a careful analysis of the contents of a bottle of your CINCHO-QUININE, and find it to contain *quinine, quindine, cinchonine, and cinchonidine*.

S. P. SHARPLES, *State Assayer of Mass."*

TESTIMONIALS.

"WELLFLEET, MASS., Nov. 17, 1876.

"I have used CINCHO-QUININE, and can say without any hesitation it has proved superior to the sulphate of quinine.

J. G. JOHNSON, M.D."

"MARTINSBURG, MO., Aug. 15, 1876.

"I use the CINCHO-QUININE altogether among children, preferring it to the sulphate.

DR. E. R. DOUGLASS."

"LIVERPOOL, PENN., June 1, 1876.

"I have used CINCHO-QUININE, obtaining better results than from the sulphate in those cases in which quinine is indicated.

DR. I. C. BARLOTT."

"RENFROW'S STATION, TENN., July 4, 1876.

"I am well pleased with the CINCHO-QUININE, and think it is a better preparation than the sulphate.

W. H. HALBERT."

"ST. LOUIS, MO., April, 1875.

"I regard it as one of the most valuable additions ever made to our materia medica.

GEORGE C. PITZER, M.D."

"RICHMOND, VA., March 28, 1877.

"I believe that the *combination* of the several cinchona alkaloids is more generally useful in practice than the sulphate of quinine uncombined.

"Yours truly, LANDON B. EDWARDS, M.D.
*Member Va. State Board of Health,
and Sec'y and Treas. Medical Society of Va."*

"CENTREVILLE, MICH.

"I have used several ounces of the CINCHO-QUININE, and have not found it to fail in a single instance. I have used no sulphate of quinine in my practice since I commenced the use of the CINCHO-QUININE, as I prefer it. F. C. BATEMAN, M.D."

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A vitalizing Tonic, superior to all others; entirely devoid of Alcoholic Stimulant; relieving Mental and Physical Prostration. An Agreeable Substitute for Nauseous Drugs and Liquors; more naturally efficient, yet entirely free from their unpleasant effects and disastrous tendencies.

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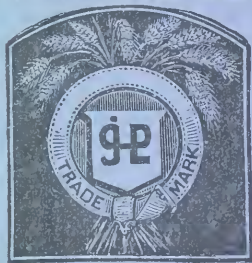
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PHOSPHO-NUTRITINE does not STIMULATE calling the already enfeebled system to further present fitful activity, only to be followed by complete exhaustion; exerting a momentary brilliancy from a dying ember, but that it repairs

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